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PUERPERAL INFECTION: ITS CAUSES AND PREVENTION.

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The term, "puerperal infection," seems to me to be the one best adapted to encompass the many diseased conditions caused by micro-organisms in the puerperal woman where the focus of infection lies within the genital tract.

The term, "puerperal fever," which is still in use by some, should, in my opinion, be discarded from medical literature; it is unscientific, expressing only a symptom of the disease, and conveys no idea of the real condition with which the physician has to deal.

Puerperal septicæma is also an inadequate expression, as it is only one form of puerperal infection.

The puerperal woman presents an organism in a lowered state of vitality, which predisposes her to infection of all kinds. The placental site with its open veins has been compared to the stump left from an amputation, and is easily infected. During and after labor there are found many wounds of the genital tract, varying in degree from a minute abrasion of the mucous membrane to an extensive tear of the perineum or cervix uteri, which furnish the locus minoris resitentiæ and become the infection atria for the various pathogenic germs sometimes found in the vagina or cervix uteri. Thus we have a true wound infection, which may be local or systemic, and varying in degree from a simple vaginitis to a rapidly fatal septicæmia.

In puerperal infection we meet the same pathogenic mico-organisms that we do in other infected wounds, and when we realize that it is essentially a surgical condition, then will we arrive at the rational methods of its prevention and cure. When I say that puerperal infection is a surgical condition, I do not mean that in its treatment it is always necessary to resort to the knife, because its use is rarely indicated; but that in the treatment of puerperal infection, we should use the same methods of antisepsis and drainage that we do in other wound infections, modified only by the character of the tissues affected.

The pyogenic bacteria are the ones with which we have most to deal in puerperal infection, the streptococci producing the most serious or systemic forms, and the staphylococci tending to remain in local inflammatory processes. The streptococcus of erysipelas is probably identical with the streptococcus pyogenes; it is certain tha. its morphological character greatly resembles that of the streptococcus pyogenes, and some of the most virulent cases of puerperal infection, with peritonitis and death, have been traced to erysipelas infection.

The bacillus ærognes capsulatus, that peculiar air-forming germ, found also in emphysematous gangrene, seems at times to be the infective agent in some of the most rapidly fatal forms of septicæmia.

The Klebs-Loefler bacillus may also infect the genitals of the parturient woman, producing at the seat of infection the characteristic diphtheritic membrane with the same severe constitutional disturbances as in pharyngeal diphtheria.

Scarlet fever may attack the lying-in woman, but it remains scarlet fever, the same as in any other person, and the infection atrium is hardly the genital tract, so it will not be further discussed in this paper. The same is true of typhoid fever and contagious and infectious diseases.

The germs of putrefaction play a more important part in puerperal infection than in other wound infection, for the reasons that from the anatomical and physiological character of the genital canal air is excluded, and owing to the relatively large amount of dead organic matter found in the lochial discharges, such as blood clots, disintegrating shreds of the decidua, and the effete products from the retrograde processes incident to uterine involution, there is furnished the most favorabl conditions for the lodgment and propagation of the saprophytic bacteria.

The gonococcus apparently has little to do with the puerperium, and some authorities disregard its part in puerperal infection; but, in my opinion, many cases of pyosalpynx begin a few days after labor, when the only symptoms are a little acute pain in one iliac region, perhaps a degree or two of fever, but a gonorrhœal salpyngitis has been set up,

which dooms the innocent victim to the mercy of the surgeon's knife, or to a life time of misery and suffering.

The healthy vagina may contain the various germs of sepsis and putrefaction, but it is also true that the vaginal secretions are endowed with germicidal powers, which in a short time will destroy or render inert any of the pathogenic bacteria.

According to Döderlin, so long as the vaginal secretions retain their normal acid reaction, and the normal vaginal bacteria—the principal of which is the bacillus named for Döderlin, who first isolated it—are present, all pathogenic bacteria, which may be introduced into the vagina are soon rendered innocuous; but as soon as the secretions become alkaline, as when the lochial flow is established, they lose their antiseptic powers, and since it is well known that the pathogenic bacteria thrive best in an alkaline medium, in order to render the vaginal secretions acid, Döderlin advises post partum douches of lactic solution. However, I do not think that Döderlin's views are sufficiently established to follow his teachings, but rather agree with Krönig, who maintains that whether the vaginal secretions are normal or not, it is a more efficient antiseptic than any which could be given in the form of a douche. I would not be placed on record as opposing the antiseptic or cleansing douche after infection has actually taken place, but until then I believe that Nature has already provided the best antiseptic which can be placed in the vagina. As to the possibility of auto-infection, I will quote from Kelly, who says: "The number and virulence of the organisms (in the vagina) are variable. It seems, therefore, probable that pathogenic bacteria are sometimes present in the genital tract, and under these conditions it requires only a transitorial weakening of the normal safeguards to bring about an infection. It does not seem impossible, therefore, that auto-infection may take place; but where infection occurs it is most likely that the bacteria are introduced by manipulations of some kind shortly before the symptoms appear; for, after all, the pathogenic bacteria probably do not lie dormant in the genital tract for any great length of time."

Contact infection is what we have to guard against, and the accoucher's fingers are the great source of infection to the puerpera. His fingers may be sterile, yet in the examination he may carry pathogenic bacteria from the vulva to the cervix uteri. Coitus a few hours before labor may be the method of introduction of the infected agent into the genital tract.

Garrigues, Jewit, Playfair, and others, still cling to Lister's theory of air infection, and in their most recent works speak of infection having taken place from atmospheric conditions; but since Schimmelbusch and others have proven to the satisfaction of all surgeons, that the air

contains no bacteria except those held on particles of dry dust, it seems to me that in the prevention of puerperal infection we disregard the condition of the atmosphere, except in so far as to use measures to prevent the dust of a lying-in room from being put in motion.

In order to give instances proving the transmission of infection to the pueerpera, I do not have to go back to 1843, when Dr. Rutter, of Philadelphia, had forty-three cases of puerperal infection, which were traced to a purulent ozena, with which he was afflicted; nor in 1847, when Semmelweis established as a fact that the students, who also attended the dissecting hall, were the cause of the great mortality in the lying-in hospitals of Vienna. But in my own limited experience I have observed several instances where I thought I could trace the source of infection to the carelessness or ignorance of physicians and midwives.

A physician, who resided in Bullock county, told me that he once had in his practice an epidemic of what he termed "child-bed fever," and lost five patients in a very short time, among them his own wife. He could never account for it, but somehow had a vague idea that he was in some way responsible for these cases, and for that reason gave up his obstetricial practice for some time, and there were no further cases in that community. In the light of our present knowledge, it does not seem unreasonable to believee that this physician carried the infection to his patients.

Three years ago I was called four miles into the country to see a severe case of septic endometritis in a primipara (white), who had been attended by a midwife, and it was only by prompt and thorough treatment that her life was saved. In less than two weeks afterwards, a physician reported to me, as health officer, the death, from general puerperal peritonitis, of a negro woman, who ten days before had been attended by the same midwife. A week or two later the midwife reported another death from "child-bed fever." I instructed her not to attend any more cases of labor for several months, and under no circumstances to wear the same clothes which she had worn while attending the cases. I also instructed her how to cleanse her hands and arms and told never again to put her finger into a woman's vagina. So far as I know she obeyed my instruction. I did not hear from her in a year or two, and had no more reports of "child-bed fever" from that locality. Does it not seem probable that this midwife was the medium of infection in these cases?

While a medical student at home on vacation, I was kindly invited by a physician to attend with him a labor in a young and strong negro girl. I did so, and as the evening was cool, wore a football sweater, which I had occasionally worn in the dissecting hall. I was permitted to make frequent examinations to determine the progress of labor, or rather to obtain some experience. He had me to bathe my hands in mercuric

chloride solution before making the examinations. The labor was normal, except there was a laceration of the perineum extending nearly to the sphincter muscle, which was not repaired. The girl died ten days later from septicæmia. I regret that it is true, but I shall always feel that our neglect in failing to repair that lacerated perineum, and my ignornce in wearing that infected sweater, were responsible for that girl's death.

Another case that came under my observation, where I thought I could trace the origin of infection, was one of septic endometritis. I was called to the labor an hour before the birth of twins, and without having been notified that I was expected to attend the case. There was no time to change the sheets, which had been on the bed for two or three days, and when I reached the case I found one of the good ladies fanning the sufferer with the top sheet, thereby stirring up all the dust that had accumulated on the sheets after two or three days' use. I had the woman's vulva and the surrounding parts bathed with soap and water and a 1-1000 solution of mercuric chloride. I was also careful in disinfecting my hands, and made only two examinations, and then did not introduce my fingers within the cervical canal. Three days later a telegram informed me that the lady had had a chill and that her fever was 104 F. She came near losing her life from a putrid septic endometritis. For a time I was puzzled as to the origin of the infection, but two or three months later her husband applied to me for treatment for nasal catarrh, and I found that he had had a persistent purulent discharge from his nose for several months. He had slept on the sheets for two or three nights previous to his wife's confinement, and to that I attribute the source of her infection.

In merely mentioning the different forms of puerperal infection, I shall adopt the classification of Garrigues, as used in his splendid monograph on the subject in the "American Text Book of Obstetrics." This nomenclature will suggest the pathology, symptoms, as well as the appropriate treatment for each condition.

Vulvitis and vaginitis may be simple, purulent, or diphtheritic.

Endometritis is the most frequent variety of puerperal infection, and it may be either septic or putrescent in character. The inflammatory process may simply affect the mucous membrane, or it may invade the muscular coat of the uterus, thus giving a metritis. Where the infection becomes systemic, and travels through the lymphatics, it is called a general lymphatic endometritis, and when it is carried through the veins, it is called a general thrombo-phlebitic endometritis. Always in metritis, and often in endometritis, the peritoneum is also involved, and we have a pelvic peritonitis. Frequently we have some, or all of these conditions so blended that it is impossible to clinically differentiate

them. Cellulitis may follow, which may end in resolution, or as a pelvic abscess.

Salpyngitis and ovaritis are rare complications of the puerperium.

Lymphangitis is one of the most frequent forms, and often ends in a peritonitis or general infection. The lymphatics of the vulva and lower one-fourth of vagina lead to the superficial inguinal glands, from which others go to the deep inguinal glands. Thus a neglected laceration of the perineum may be the starting point of a general peritonitis. The lymphatics of the cervix go to the internal iliac and sacral glands, and an infection beginning in a lacerated cervix very often leads to a pelvic peritonitis. The uterus is the net work of lymph-spaces and channel, so that a uterine lymphangitis practically means an inflammation of the surrounding tissues as well, and frequently systemic infection.

Phlebitis, though not as frequent as lymphangitis, is perhaps the most dangerous form of infection. From an infected thrombus, which gets into the blood current, thereby forming an embolus, the infection may be carried to any part of the body. Thus following, and perhaps complicating a phlebitis, we may have infarction of the lung, septic pneumonia, endo-carditis, hepatitis, nephritis, or inflammation of any part of the body where metastasis can take place. Phlegmasia alba dolens begins from phlebitis or cellulitis.

Septicæmia and pyæmia are generally sequelæ of phlebitis and lymphangitis, though there is one form of septicæmia which seems almost to be primary, and is so virulent that death often occurs before any pathological changes can take place.

Regarding the mortality from puerperal infection, I can do no better than quote a paragraph from a very strong article by Jewitt:

"While in pre-antiseptic times the puerperal mortality was many times greater in public institutions than in private practice, today the pauper delivered in a hospital is exposed to less risks than the well-to-do classes who are confined in their own homes. Insurance reports show that of all deaths in women between the ages of nineteen and twenty-nine more than eighteen per cent., and between the ages of twenty-nine and thirty-nine more than thirteen per cent., are due to puerperal causes. From sixty-five to seventy-five per cent. of puerperal deaths are attributable to sepsis. It is fair to assume have to do almost wholly with a class delivered outside of hospitals. This indicates a mortality that is truly appalling, especially when one reflects that it falls upon women in the prime of life and usefulness, and is the result of a preventable disease. Yet the disastrous effects are not represented by the mortality alone. Thousands of invalid mothers owe their impaired health to the milder grades of sepsis in childbed. No stronger evidence

could be offered than is afforded by the foregoing facts of the need for improvement in the obstetric methods of the general practitioner."

Leopold reports over three thousand consecutive labors without a death from sepsis, and a number of American lying-in hospitals show records almost as clean. What of our own record, gentlemen; can any of us who attend as many as a dozen labors a year, go for five or ten years without a death from sepsis?

The prevention of puerperal infection may be summed up in the two words, which seem hardest for the general practitioner to master—i. e., asepsis and antisepsis.

The general practitioner (and this paper is addressed entirely to that class of physicians) should, as well as the surgeon, cultivate the aseptic "habit;" or, as Kelly terms it, the "aseptic conscience." He, of all men, should be scrupulously neat and clean at all times. He should keep those great harbingers of infection, the finger nails, trimmed close, and the spaces between them free from dirt. After contact with any infected wound or other infection, he should carefully sterilize his hands, paying especial attention to the nails, and the spaces underneath them, because he knows not at what moment he may be called to attend a confinement, and a little negligence in this respect may cost the life of his confiding patient. He should, under no condition, attend a case of labor wearing the same clothes he wore while performing an autopsy, or which he had worn in attendance upon a case of erysipelas, diphtheria, septicæmia, or other disease where the infection may be carried by clothing.

To speak of having a labor conducted upon strictly aseptic principles seems incredible to some physicians, and they smile at the idea. I will admit that in some cases it is impossible, but I affirm that in the majority of cases, even in private practice, it is not only possible, but practical, to maintain, very nearly, if not complete asepsis throughout labor, and with a competent nurse in attendance, throughout the puerperium.

When I have been engaged to attend a confinement, I try to give careful and full directions for the preparations of the patient and her surroundings. She is to have prepared for the occasion the following articles: At least two gowns, three pairs of sheets and pillow cases, two pairs of white stockings, from six to twelve towels, about the same number of vulva pads, and an abdominal binder, all of which have been boiled for an hour, carefully dried and pressed, and wrapped in a sheet, which has also been boiled, and the package placed where the dust cannot reach it. They are also to have ready a pad, about eighteen inches square, made of a pound or two of absorbent cotton, covered with sterilized gauze, which is to be placed underneath the buttocks to catch the discharges, or two folded sterilized sheets may be used for this purpose, also a piece of new white guttapercha cloth, forty inches wide and five

or six feet long, to go beneath the sheet and pad to keep the mattress dry and clean. I request them to purchase a new fountain syringe and bottle of bichloride of mercury tablets, neither of which is to be opened until I am ready to use them. They are to have ready plenty of boiling water and two bowls for my use.

As soon as the first pains come on, if the woman's bowels have not acted freely during the day, she is to have an enema of warm salt water, so that during labor there will be no danger of infection from fæces. She then is given a full warm bath, if convenient, and always a hip bath, being careful to scrub and cleanse the thighs, pubes, vulva and perineum. She then puts on a sterilized gown and a pair of white stockings, the rubber cloth is placed on a mattress, the perineal pad and sheets are placed over that and as much other bed clothing over the sheets as may be necessary to keep the patient comfortable. There is to be no sweeping or dusting in order to make the room appear tidy, and in changing the bed clothes and making other movements about the room, there is to be as little dust raised as possible.

From the way this reads, some may suggest that the labor would be ended before the preparations had been carried out, but in reality they are but little trouble and do not take over half an hour's time at most, and they give the patient and her attendants something to do and think of until the doctor appears upon the scene. It is also quite inexpensive, the whole outfit not costing over two dollars. It is simple cleanliness, and can be carried out in the great majority of the homes which we visit.

The physician should wear a sterilized gown, or at least an apron, to protect the woman from infection from his clothing, as well as to protect them from the discharges. While the physician is sterilizing his hands, it should be done as thoroughly as for an abdominal section, the attendant bathes the woman's vulva and adjacent parts in a 1,1000 solution of mercuric chloride. The method which I prefer for sterilizing the hands is that used in the von Bergmann surgical clinic. The hands are first thoroughly scrubbed for five minutes, if possible, with green soap and warm water, dried on a sterilized towel, then rubbed for a minute in eighty per cent. alcohol, then immersed for a few minutes in a 1-1000 solution of mercuric chloride. A bowl of bichloride, or one percent. lysol solution is kept by the bed, into which the hands may be dipped before making vaginal examinations, which should be very infrequent, and the finger should never actually go inside the cervical canal.

When necessary to use any instruments, they should be sterilized in a boiling soda solution. Every tear, or laceration of significance, of the perineum, should in every case be immediately repaired.

As I have said, I am opposed to any antiseptic douche, either before, during, or after labor, unless there is reason to believe that the genital

tract is already infected; but if instruments are used, or the hands introduced into the vagina or uterus, unless certain of asepsis, a cleaning douche should be given after such manipulations. After labor the woman's genitals are washed off with plain boiled water and a 1-1000 solution of mercuric chloride and an aseptic vulva pad placed in position; every time afterwards that the pads are changed, the parts should be similarly cleansed.

There are some homes in which we are compelled to attend cases of labor where we cannot possibly approach asepsis, and under such conditions we can only do as Rudyard Kipling says, "Do your best and leave the rest alone."

SOME VIEWS ON THE RACE PROBLEM.

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The recent outbreak of racial feeling in New Orleans, New York and Ohio, widely separated as they are, will call attention to a question which has often been propounded in the past, but which is still in an unsettled condition. It is of such paramount importance that its discussion now will be very timely.

What shall be done with the negro? To go into a history of his capture and importation to our country as slaves would be needless repetition. The question now proposing itself for discussion and solution is the consideration of the above query—What shall be done with him?

By way of comparison let's recall a few facts of history. When the Manchus conquered the Chinese nation, they being of common stock or origin, mixed by assimilation without changing any characteristic. When the Spanish conquered Mexico, the native Indians being of common origin, assimilated the conquerors, forming a homogeneous race and making the Mexican nation, who are a race of people in whom procreative and continuing powers are well preserved, with the principle of perpetuation prevailing. Another notable instance of assimilable homogenity are the Eurasians of India. The Anglo-Saxon engrafted on Hindu stock; their stability show them to be endowed with procreative continuity, hence the assertion that the stock in this instance is also of common kind. Other instances could be cited from history, but the above suffices for purpose of illustration.

In the United States the attempt at admixture between the races has been in progress for more than two hundred years, with no permanent result. The offsprings are so poorly endowed with the powers of continuity that the progeny of white and black effort usually die out where

the effort is continued on white stock; but where the mulatto or quadroon is turned toward the negro, then the stream of vitality is soon assimilated, and in the current of negro blood the white strain is absorbed and lost. Therefore we see no evidence of a stable mixed people, but only the primary mixture, which the process of continued illicit effort keeps vital. The law of anthropomorphology is as natural and certain in its application as are any of the other laws of nature. The above shows the application of that law to be invariable. It cannot be transgressed; all effort at its violation calls forth prompt protest from outraged nature.

There are minor points of anatomical difference, which only appears by comparison; but the strongest evidence of a diverse origin of the Aryan and negro races, is that wise Nature, or God, frowns on every effort at admixture for continuity, invariably cutting off the result, never allowing it to go beyond a limited number of generations. With these facts before us, we must conclude that Nature has no more intention to allow the hybridization of the white and black races for continuity than she does the same effect between the horse and the ass, in whom the points of difference are so slight that man considers them of the same genus.

What shall be done? If we attempt amalgamation, every instinct revolts against it. Nature would declare war on it, and it would revolve itself into a question of survival of the fittest, as heretofore determined from a working of providential natural laws in every instance where assimilation has been attempted, consequently all thought at efforts along those lines will have to be abandoned as impossible, there being natural barriers supervening which cannot be overcome.

With the thought of amalgamation or assimilation relegated to the oblivion it must always occupy in nature, we will consider the question from another point of view. I maintain that the above propositions are inexorable and cannot be overcome, but will always exist under a working of the afore mentioned plan of nature; therefore, we can only consider whether we will have him with us permanently as a foreign element, or take steps to eliminate him. Notwithstanding all enactments to the contrary, the above is the only rational view to take of the question. We cannot consider any people as of us in homogenity who cannot become an integral part of us by assimilation. Therefore, a foreign element who cannot integrate in a community would be better off if eliminated from within that environment. Such being the status of the case under consideration, the wisest course than can be pursued is to consider some plan of removal.

Transport the negro to his native heath, where he can work out his salvation in his own way and time. That he will ever be a factor of im-

portance or prominence in the history of the world, we hesitate to assert, but he will certainly be, by removal to another country, the less a thorn in the social and political body of our nation. His position as a tiller of the soil and creator of wealth is more than offset in the disadvantage of such irritating occurrences as have recently been enacted in the several localities mentioned.

The principle of freedom and equality before the law, given him by this nation in its attempt to elevate him in the scale of world status, has served the purpose of irritating him and arousing the bad powers within his ignorant brain, which by development has evolved him from the simple harmless condition of his slave ancestry into a most vicious and dangerous element to our safety and civilization; I say civilization because the frenzy aroused by such occurrences as transpired in New York, etc., recently are obliged to be retroactive, and will certainly retard the development of the higher faculties of man, though the temporary assertion of savage ferocity was due to the most exasperating, exciting causes. Yet, under a normal working of our ideas of right and equity, we feel it a reproach upon our present endeavors at a high beneficent civilization, excusable only by coming under the heading of the first great law of nature, "self-preservation." The conditions existing which will permit recurrences of such affairs should be sought out and removed, which can be done by wise restraint, or thoroughly by the application of the suggestions embodied in this article. Intelligent reflection on the subject prompts the suggestion that steps should be taken looking to the elimination of the negro, who, in his present depraved, vicious disposition and manifesting the lawlessness of brute creation, is a menace to the peace and happiness of any country harboring him as a sojourner.

The sentiment of affection that existed between the slave and his owner has about all disappeared, the present generation of negroes being imbued with a spirit of hostility to law and order, morally depraved, under no restraint, and as a class are a menace to peace and safety. For the sake of settling a vexed question, with the object of arousing interest and discussion, and with the purpose of inciting action that will grapple with and solve the problem and dispose of it in a manner that will be humane, will meet the approbation of a civilized world, and give us all the relief we want, I write this article.

No possible good can come of deferring the settlement of the race problem. Let's grapple it now. The time is propitious, and the reasons quite clear for its consideration and disposal. Either by deporting and colonizing them on territory acquired on their native continent, or on some contiguous territory where natural conditions would be favorable, or we should aggregate them in some part of our recently acquired do-

main, something must be done; conditions as they now are cannot prevail much longer. For a question of public interest, it is becoming vexatious and cries aloud for settlement.

In revolving the question and in considering deportation there can be good reasons urged against the plan, fearing that it may be considered impracticable, and supposing that we must live in community as heretofore, believing that there are some good members of the race who are worthy and capable of advancement in the scale of civilization, and with the possibility before us of their aggregation elsewhere at some time in the future, and with the most humane feeling for the good and deserving ones of the race, I propose as a measure that would be radical and effectual for the purpose of relief, which should also be adopted for the suppression of crime among the lawless degenerate whites as well, the desexualization of every person of determinedly depraved instincts as evidenced by crime, or vicious tendencies where same are pronounced enough to manifest in a certain accurate recurring way so as to leave no doubt as to their character in the minds of a commission of medical experts and scientific men of known ability, who should be thoroughly familiar with the question and its far-reaching effect upon the result in posterity.

Heredity is responsible for more depravity than is known generally or admitted, and a course adopted to eliminate the possibility of the depraved vicious degenerate from continuing through heredity to be a detriment and a menace to higher attainment in civilization and progress, should be considered, and such menace should be removed as suggested, through radical measures for relief, that the moral and the good may survive as the parents of future generations of mankind, while the wicked criminal class may cease to exist and perpetuate their kind upon the world to debauch and retard the elevation of man, and jeopardize the present safety and happiness.

To unsex all who are vicious and dangerous with their progeny will appear, at first thought, to be an abhorrent wickedness, but if considered rationally, it advances itself as the most logical solution that can be considered. A study of criminal statistics of any country where record is kept will show that criminality is heritage, and results invariably from depraved instincts, engendered and transmitted by parents. A watch kept over progeny of any notorious criminal will surely be rewarded by proof to sustain this theory at first temptation or opportunity for the development of the transmitted trait.

Then why subject the moral and law-abiding to the twofold danger of first becoming a prey to the debased or thievish rascal (I include in this proposition the white degenerate), or in the event of the trait being dormant, to intermarry with such character and possibly witness the de-

velopment of the disposition in the children of such union. As previously stated a common country means common interests, and believing that common interests have never and cannot exist between unlike species, then, why should the attempt be further continued in our own case. That I may not be misunderstood, I admit the negro into the fold of humanity; but I cannot go against reason and science, and admit, nor believe him to be of cognate origin with the whites. He was evolved as we were, but at a different period, and under conditions that assert a great diversity in origin from our own. That being a fact, brings it under that immutable rule of natural law which declares that there are barriers set up among all her species of life which cannot be overcome, and any attempt to violate the rule and hybridize is abhorrent and sinful, and the result cannot survive. We should accept the working of those laws as inevitable, and wisely respect them for their result, and that they may be kept inviolate. I suggest the separation of the races as acquiescence to a demand of natural law. I think a practical plan could be promulgated that would give good results and meet the approval of all people interested, by colonizing the negro in the Philippines and let them settle the question of supremacy with the natives of that archipelago. By doing that, we might turn to good account an otherwise unprofitable acquisition of territory which could never, under any circumstances, become an integral part of our country. Were we to settle that archipelago with our own people, under the change of environment new conditions would arise, within a few generations the people would be changed under a working of natural law, they would become impatient at any mother country restraint and demand, and ultimately obtain their independence of us. It would be impossible to continue the bond of fraternal sympathy for more than a very few generations.

But if our intelligent government concludes to permit conditions to remain "in statu quo," we should adopt some firm, humane way to suppress strife and lawlessness, even to making the sale of fire arms to a negro a crime of grave import. Also take away the franchise of citizenship. Why should we extend such a privilege to an unappreciative, unworthy race, who are not of common origin, and cannot be assimilated nor amalgamated. Not being of like kind, they cannot have mutual interest in our country.

We are not considering this subject from a viewpoint of sympathy or sensationalism, but from a practical observation as to whether the two races can continue to exist under present conditions in a common country. Asserting that they cannot assimilate, then how can they exist in community and both yield the same allegiance to law and order where one must predominate and the other be correspondingly disgruntled.

The negro under the institution of slavery was kept well subjected by wholesome restraint in an inoffensive state. Many of them were trusted friends, in whose care was left the family of their master, who felt that during his absence his family were in safe hands, and would be guarded and protected by the faithful slave in whom was reposed so much trust. Such was the result of sound teaching through several generations of slave conditions and influence. Their freedom has been the means of severing those kindly relations, and has resulted in the present generation being imbued with a hostility to law and order that makes of them largely a criminal class. Savage propensities are now being developed and generally displayed by numbers of the race who seem to set all law at defiance, who do not seem deterred by any example of punishment inflicted upon the vicious evil doers who have been apprehended and punished for their several iniquitous horrors; hence I am thoroughly convinced that the experiment of keeping them in common relation as hewers of wood and drawers of water has demonstrated, that the condition is an unsafe, unsound theory, and can never be wholly made to operate without such revolting episodes as has been recently enacted in New Orleans, where a negro brute ran amuck defying law and killed several good citizens, and being responsible for a tragedy that shocks civilization, and will make thinking people all over the world pause and ponder why such conditions should continue which render such tragedies of possible recurrence. Why should this menace longer exist to worry and keep us in a condition of unrest and apprehension? The more recent outbursts of feeling in New York and Ohio is still a lively topic.

In the interest of humanity, for the sake of peace and happiness that would result from a permanent solution of the question, let's advocate separation by removal of the negro to some place that would give them the greatest opportunity for developing the good traits that stand for improvement and civilization. A duty we owe to ourselves which we should discharge, is to adopt means of separation. A duty we owe to humanity is to put the negro in possession of his new country free and untrammeled by restraint under conditions favorable to his continuity. That done, our obligation shall have been discharged, and having his own salvation to work out, he would adapt his condition to his environment in the best way to exist and keep pace if possible with progress, so far as his intelligence and inclination would admit.

The strained relations and bad feelings engendered by recent riots make further trouble and serious catastrophe probable. Inconsistent, absurd notions of what ought to be done, on this subject make it an intricate problem. For the reasons mentioned, and others advanced, separation would be a prudent measure, and is the only solution that offers any future to the negro race. Any false popular philosophy looking to

their continuance with us would be a sad blow to their future prospects. No relation can be established that would make continuance with us advisable, profitable or safe for either. I am sure an enlightened public opinion will strengthen a logical policy that consistently urges separation and the colonization of the negro at some place in the world, where climate and conditions would favor his development and continuance as a race and nation.

That the Southern white should occasionally lose patience and break some rule of civilization is because the provocation is so great. The negro has been thirty-five years a free man, yet he does not own 1 per cent. of the common wealth of the South. He is less than 50 per cent. of the total population, yet he furnishes 97 per cent. of the criminal class, and when it is considered that his crimes cover the whole category, with murder, arson, theft and rape leading, it is a serious showing. Rape is his favorite capital crime, which act stirs a community where committed to the very core.

To the people who read of a "Negro Hanging" in the papers the impression may prevail that the Southern white is a most lawless, inhuman brute; but just acquaint yourselves with the facts, and you will admit him a most conservative, law-abiding citizen who has done more to advance the negro in the scale of civilization than all other factors combined. To him is due the credit of eliminating the savage and inhuman element from the negro character to the extent that now exists, making the Southern negro superior to any other class of negroes. Though their standing may be low, yet it is decidedly improved over the original article as he was when imported from Africa.

Could the provocation be fairly cited with each announcement of a negro killing, you would nearly always admit it justifiable. The act is noticed, but the causes leading up to it are not usually mentioned. Our lax system of dealing with summary crimes is so uncertain and exasperating that justice is meted out without trial, by a jury composed of the aggregate community.

None of these points set forth have been treated exhaustively, but are only touched on briefly as we go along.

Now let us consider the negro in relation to disease. His usual disregard to all laws of health and all rules of hygiene make him a dangerous element in the spreading of infectious or communicable diseases. During the recent epidemic of smallpox in the city of Birmingham, Ala., 1897, 1898 and 1899, there were treated 745 cases, of whom 709 were negroes. (Statistics from Dr. W. H. Wilder, who had charge of the outbreak.) Take the dread scourge of the world, consumption, the germs of which are very communicable when conditions favorable to spread exist, and the negro, who was nearly free of the disease under the exist-

ence of slavery, are today, from their unhygienic and filthy mode of life, existing upon such a low vital plane that resistance to onslaught is away below par or equilibrium, which places them in a condition that invites the disease, and which develops and usually runs a quickly fatal course, and is communicating among them so rapidly as to prove a startling condition where inquiry is made. It is the cause of death in nearly one-half the negro death rate, while that other curse of degenerate life, syphilis, has directly and through heredity infected nearly all the race with some of its various forms of manifestation. All these facts and numberless others, which could be cited, go to convince us that the time has come for a parting of the ways, and I believe the solution will be, when determined by a commission for the purpose, that the best interests of humanity and civilization will be subserved by deporting the negro to some place where conditions will favor his continuance and elevation.

My suggestions are not prompted through any motive of injustice, nor is there any spirit of malevolence in my thoughts toward the negro, but the question is up and must be disposed of. Unless it is settled by some wise law prevailing, the irritation which manifests itself in these sporadic outbreaks will become more general, and will assume proportions alarming in character, at a constantly increasing rate under present conditions, which thought is viewed with so much alarm that the question of settlement in a permanent way is the livest issue of the hour.

There is no thought intended in this article that is not pacific, and its meaning is for a solution of the question that has been an issue ever since the war, and will continue to be until the element is eliminated. There is no use soaring in platitudinous generalities and proposing any makeshift for political effect. If the question is solved, separation is the way it will go.

GOLDEN RULES OF OBSTETRIC PRACTICE.

When abortion is inevitable, plug the vagina with strips of gauze or some clean, soft material, and wait six or eight hours. You will often find the ovum in the vagina on removing the gauze. If not, plug again and wait.

If any part of the ovum or decidua remains in the uterus, clean it out at once with the finger or curette, not hesitating to give an anesthetic if any difficulty is met with.

If there is a rise in pulse rate and temperature, and the vaginal secretion is foul, give an anesthetic, dilate the cervix, empty the uterus, scrape it clean, no matter what stage the process of abortion has reached.

In other words, use artificial dilatation, followed by emptying and cleaning out the uterus in threatened, incomplete and complete abortion alike, whenever the uterine cavity becomes the source of septic intoxication.—Dr. Fothergill.

Selected Articles.

THE VALUE OF GLYCO-THYMOLINE (KRESS) IN LOCAL TREATMENT OF DISEASED MUCOUS MEMBRANE.

By George A. Hewitt, M.D.,

PHILADELPHIA, PA.

Glyco Thymoline (Kress) has been so well known for years, has been so widely and beneficially employed, and fulfills so many important indications, that it is superfluous at this date to enter into any description of its physical and chemical characteristics. There is one valuable feature of its action, however, which seems not to have been sufficiently emphasized. I refer to its powerful exosmotic action, by which it withdraws serous fluid from congested and inflamed mucous membrane, thus relieving engorgement and œdema. This influence, in addition to its emollient and antiseptic qualities, renders it a peculiarly acceptable and efficacious application to an inflamed mucosa. Glyco Thymoline (Kress) for these reasons combats the material causes and removes the results of inflammation. Furthermore, the relief of the distended blood vessels stimulates the absorbents to perform their function in the absorption of exudates and infiltrations. The alkalinity of the fluid moreover, facilitates the removal of accumulated morbid secretions and crusts. It is by virtue of this union of therapeutic properties that Glyco Thymoline (Kress) has achieved so much success in the treatment of diseased mucous membranes. These structures are particularly exposed to inflammatory attacks, due to atmospheric, mechanical, chemical and bacterial agencies.

My own experience with this preparation extends through a number of years, and relates principally to its service in those affections of the nose and throat which comes under the observation and care of the general practitioner. Those cavities are extremely prone, as every one knows, to catarrhal attacks. Starting in one or other of these localities, the pathological process may be very rapidly propagated to the Eustachian tube and middle ear; long continued hypertrophic minitis, aggravated by repeated exacerbations, is the point of departure of anterior and posterior hypertrophies. Some of the infectious diseases of childhood, notably measles and scarlatina, are typically characterized by the involvement of throat and nose in a general disease-process. As the lymphoid tissue of these parts is extremely susceptible to irritation, we are apt to witness, dependent upon the same factors, attacks of adenoiditis, which may serve as the original step in the development of adenoid vegetations, with all their train of evil consequences. A nasal affection may also extend through the lacrymal canal and invade the or-

gan of vision. The larynx may likewise become involved, and in some instances the disease may attack the deeper portions of the respiratory system. Numerous reflex troubles also spring from nasal maladies. It is, therefore, incumbent upon the practitioner to institute treatment as early as possible in every case, in order to avoid ulterior and disastrous consequences.

In all cases of recurrent and chronic catarrh of the nose and throat, unaccompanied by extreme pathological alterations, Glyco Thymoline (Kress) is an admirable application, and in a large number of cases no other local measures are demanded. If hypertrophies or adenoids are present, operative procedures will be required for their radical cure. In illustration of the class of cases in which Glyco Thymoline (Kress) will be found of marked benefit, the histories of a few cases may be briefly cited.

ACUTE RHINITIS.

Cases of acute rhinitis or coryza do not ordinarily come under the physician's care. If accompanied by decided chilly sensations, some fever, and general malaise, the patient will sometimes seek medical advice in the fear that he is about to suffer from a more severe disorder. If seen sufficiently early, action upon the skin by pediluvia, warm bath, warm drinks and Dover's powder, or an equivalent, will generally abort the attack. Most cases run a neglected course, and may finally be brought under professional observation because the nasal discharge shows no tendency to diminish. In the latter class the use of Glyco Thymoline (Kress) diluted with four to six times its bulk of water, and passed through the nasal chambers by means of Bermingham's douche, two or three times daily, soon proves effective. This douche is a very simple and inexpensive apparatus, the management of which is easily learned by any one. Free flushing of the cavities in this manner is preferable to the use of a spray, as it cleanses the parts of inflammatory secretions and is thus enabled to continue the action directly upon the seat of disease. Some cases of the kind are as follows:

Case 1. A man, 32 years of age, had taken cold three weeks previously from exposure in rigorous weather. He had suffered ever since from coryza, which annoyed him particularly by its persistency. The use of Glyco Thymoline (Kress) in the manner above indicated soon afforded him relief, and in the course of a week the nasal discharge was completely suppressed.

Case 2. A woman, 29 years of age, had been troubled with coryza and sore throat for two weeks. Breathing was obstructed, and there was considerable mucous discharge from the nose. The nasal cavities were irrigated with a solution of Glyco Thymoline (Kress), and it was also used as a gargle. These local measures, together with moderate doses of quinine, were soon successful in effecting a cure.

Case 3. A man, 25 years of age, had been troubled with coryza for a week, together with tickling in the throat, some pain in swallowing and a cough. The half arches were injected, but the tonsils were not swollen, nor was there any general pharyngitis. Several full doses of quinine were given and Glyco Thymoline (Kress) was used to flush the nose and also as a gargle. Speedy recovery ensued.

CHRONIC RHINITIS.

In persons of a weakly constitution, in those who are confined too closely to the house, and especially in those of a scrofulous diathesis, there is a strong tendency to catarrhal attacks. Such individuals suffer, during the colder portion of the year particularly, from a succession of attacks. In simple chronic rhinitis, chronic coryza or chronic catarrh, there is a free proliferation of the mucous membrane and turgescense of the erectile tissue. Patients of this class usually require tonics and alteratives, such as iron, quinine, strychnine, the hypophosphates, arsenic, mercuric bichloride or cod-liver oil. Glyco Thymoline (Kress) acts directly upon the seat of disease. A few illustrative cases are appended.

Case 4. A boy of 12 years, had suffered from repeated attacks of malaria, and, being fond of books, hardly had as much out door exercise as a growing child requires. His general health was fair and, with the exception of the malarial paroxysms, he was rarely ill; but in the winter he scarcely recovered from one nasal catarrh before he was again attacked. He was annoyed by the constant necessity of using the handkerchief, and his respiration was often somewhat obstructed. He was placed upon a combination of iron, quinine and arsenic with the local use of Glyco Thymoline (Kress) by means of the Bermingham Douche. His strength gradually increased, the liability to take cold was decidedly lessened, and he was encouraged to spend more time playing in the open air. After a summer in the country he returned greatly invigorated and with a normal nose. During the following winter he had but little trouble.

Case 5. A girl, 11 years of age, was similarly affected. She was well built, well grown and usually quick in her studies. She was fond of girlish play also, but exhibited a marked predisposition to nasal catarrh. On account of delicacy of constitution, she was ordered compound syrup of hypophosphates with cod-liver oil. Locally Glyco Thymoline (Kress) was used in the manner already described. The nasal catarrh and the tonsillitis, to which she was also subject, became much less severe and frequent. For the past year she has been entirely free from trouble, is blooming like a rose and heads her class at school.

HYPERTROPHIC RHINITIS.

If chronic nasal catarrh is neglected, it terminates in hypertrophic rhinitis. The substance of the mucous membrane, or corium, the superimposed epithelium and the submucous tissue, become thickened and stiffened by an organized infiltration, which keeps the erectile tissue constantly dilated and full of blood. This hypertrophy, together with the presence of morbid secretions, causes notable obstruction to respiration; the patient breathes more or less habitually through the mouth; the lips, tongue and buccal cavity are dry; the Eustachian tube is often involved; there may be dullness of hearing and attacks of laryngitis, tonsillitis or laryngitis are apt to occur. If such cases are allowed to progress unchecked, they usually give rise to anterior and posterior hypertrophies, which will require surgical intervention.

Cases of hypertrophic rhinitis, without thickening of the septum or turbinates, are as follows:

Case 6. A man, 34 years of age, had suffered for years, especially in cold or damp weather, from difficulty of breathing, accompanied by a thin discharge from the nose. At night he was obliged to sleep with his mouth open. He was prone to attacks of follicular tonsillitis. This man was appreciably benefited by a course of arsenic internally and the persistent local use of Glyco Thymoline (Kress). In the course of a few weeks the situation was entirely changed. A sense of obstruction was then seldom present. The discharge had entirely disappeared. He is now almost entirely free from his old symptoms. Whenever there is any threatened recurrence he has immediate recourse to his bottle of Glyco Thymoline (Kress).

Case 7. A woman, age 22 years old, had suffered for years from an aggravated case of hypertrophic rhinitis. Obstruction was marked, discharge was constant. At night she constantly breathed through her mouth. She was subject to sore throat and attacks of bronchitis. This patient was directed to take hypophosphites, malt and cod-liver oil, as she was of a distinctively strumous diathesia. Withal, however, she was possessed of considerable muscular strength, and, aided by the local action of Glyco Thymoline (Kress), made a very satisfactory recovery.

ACUTE PHARYNGITIS.

Glyco Thymoline (Kress) is a serviceable remedy in the treatment of the above disorder. It is diluted with several times its volume of water and used as a gargle. Patients often testify to its value in alleviating the pain of the inflamed throat. Among many cases in which it was beneficially employed were the following:

Case 8. A young man, 19 years of age, had taken cold two days previously, had a chill, pain in the head and limbs, cough and slight expectoration. There were no rales in the chest. The throat was sore; he

had pain in swallowing, and the pharynx was the seat of a diffuse redness. General treatment appropriate to his condition was given. The man himself attributed much importance to gargling with Glyco Thymoline (Kress), which, as he expressed it, "went right to the spot."

Case 9. A woman, 22 years of age, had suffered two days with sore throat. There was pain in swallowing; she had headache, backache, and pain in the limbs. The pharynx was red and swollen. The chest was clear. The same local treatment was equally beneficial as in the preceding case.

Case 10. A woman, 55 years of age, after an imprudent exposure, was seized with sore throat, pain in the neck, and difficulty in breathing. She was alternately chilly and feverish. The soft palate and half-arches were vividly red. There was no enlargement of either tonsil. The cervical glands and the left sterno-mastoid muscle were tender to the touch. Internal remedies were administered, but the patient ascribed no little share in the improvement which took place to the use of Glyco Thymoline (Kress) in the form of a gargle.

Case 11. A woman, 24 years of age, in consequence of a chill suffered from aching pains and sore throat. The pharyngeal mucous membrane was intensely injected, but the tonsils were unaffected. In this case, likewise, the gargle was regarded as contributing materially to the cure.

CHRONIC PHARYNGITIS.

If, as often occurs, chronic pharyngitis is the result of an old affection of the mucous membrane of the nose, the latter organ must receive the same treatment already outlined as proper for chronic rhinitis. The following cases may be referred to as examples:

Case 12. A young man, aged 24 years, had been annoyed for several years by chronic pharyngitis due to smoking. From time to time during the day, and especially in the morning just after rising, there was hawking, which brought up, without difficulty, a mass of thick mucus. This was the chief feature of the case, and was notably aggravated by exposure to cold, damp weather. Abstinence from tobacco was advised, but, although he reduced his former allowance, he seemed unable to abandon the habit. Gargling with the fluid of which we write afforded him perceptible relief, reducing the inflammation and irritability of the mucous membrane and diminishing secreton. In connection with the other methods adopted, it was finally successful in effecting a cure.

Case 13. The same efficacy was displayed in the case of a young man, aged 27 years, who had for a long time been subject to chronic pharyngitis, dependent upon nose trouble and accompanied at intervals by occlusion of the Eustachian tube. In this case the fluid was used both in the nose and throat.

FOLLICULAR TONSILLITIS.

In this disease, so common among young children, Glyco Thymoline (Kress) may be employed with advantage. Its exosmotic properties are extremely serviceable in reducing the size of the swollen glands. The enlargement is apt to subside slowly even after the active stage of the inflammation has passed. Children who are old enough to gargle may employ the remedy in that manner. In those too young, it may be applied upon absorbent cotton. Representative cases are :

Case 14. A boy, 11 years of age, had suffered for a day from headache and fever, with pain in swallowing. Both tonsils were red and swollen, especially the right, which was studded with patches of exudation from the crypts.

Case 15. A girl, age 15 years, had had a chill twenty-four hours previously, her throat felt sore and it pained her to swallow. The glands of the neck were swollen and there was fever. Both tonsils were considerably enlarged. The crypts were exuding their characteristic discharge.

Case 16. A young woman, 19 years of age, was attacked by vertigo and lost consciousness. Twelve hours later both tonsils were found greatly swollen, almost meeting in the middle line. The cervical glands were moderately enlarged. The surface of the tonsils were dotted by exudation.

The three immediately preceding cases were all treated in the same way, as far as local measures were concerned. This has been described above and need not here be repeated.

HEMORRHOIDS.

The power of this remedy to relieve turgescence is admirably shown in Hemorrhoids, especially of the internal variety. This affection very frequently occasions severe distress. Pain, itching and hemorrhage combine to render the patient miserable. In some instances they become seriously debilitated. In the earlier periods of the malady a practical cure may be obtained by the use of Glyco-Thymoline (Kress) as an injection and compress. The preparation is diluted with an equal quantity of water and of the mixture from two drachms to half an ounce are thrown into the rectum by means of a small syringe. This operation is performed two or three times a day. In the intervals it is a good plan to insert a wad of absorbent cotton, saturated with the fluid, into the rectum in order to secure a more constant action. The remedy has also been given with success by the mouth in such cases, the dose being a teaspoonful, well diluted. Cases in illustration of this mode of treatment are:

Case 17. A man, 50 years of age, of robust build, who had always en-

joyed good health and muscular vigor, was severely afflicted. The tumors were not large, but they gave rise to intense, lancinating pain in the rectum, shooting likewise into the urethra. There were frequent hemorrhages. For a month or more the man had been unable to sleep much, and has lost considerable flesh. The use of the remedy as indicated above was followed by a very happy result. The symptoms were rapidly ameliorated, and by the end of a month entirely disappeared.

Case 18. In the similar, though less severe case of a man, 52 years of age, there was pain and occasional bleeding, but the most prominent symptom was distressing pruritus. All the manifestations were fully relieved by the use of Glyco-Thymoline (Kress).

VESICAL, UTERINE AND VAGINAL DISEASES.

In cystitis the same preparation produces excellent results, removing from the bladder the accumulation of mucus which, by its continued presence, aggravates the local condition. After the organ has been thus cleaned, the remedy is strikingly efficacious in allaying the inflammation. For irrigation of the bladder one part of Glyco-Thymoline (Kress) is added to ten or twelve of water.

In endometritis the cavity of the womb is thoroughly cleansed or curetted, according to circumstances and the indications of the case, after which it is packed with tampons impregnated with a one to ten solution of Glyco-Thymoline (Kress). In moderate cases of leucorrhœa this fluid alone will suppress the discharge.

In gonorrhœal vaginitis this remedy has proved effectual. By the courtesy of a colleague, I am permitted to quote the two following cases which came under his observation:

Vaginitis.—The first was that of a young unmarried woman who suffered from acute vaginitis. Examination by the microscope showed the presence of the gonococcus. The disease was well advanced when the patient was first seen. The discharge was profuse, acrid and excoriating. She had been treated by different methods without improvement. Douches were ordered of a solution of Glyco-Thymoline (Kress), ten per cent, and tampons saturated with the same preparation, full strength; and under this treatment the patient completely recovered in less than ten days. The patient has remained well for four months, and there has been no recurrence of the former trouble.

Fungous Endometritis.—The second case was that of a married woman, 36 years of age, in whom there existed extreme granular degeneration of the endometrium. The cavity was curetted and packed with gauze saturated in Glyco Thymoline (Kress), full strength. Recovery was rapid and complete. There was no mucous discharge.

THE MODERN TREATMENT OF INCIPIENT PULMONARY TUBERCULOSIS.*

I have taken as the subject-matter of my paper the treatment of the preliminary stages of pulmonary tuberculosis, and I propose to limit myself to this phase of the disease. We are confronted in discussing the nature of tuberculosis with a devastating affliction of the most deadly, the most virulent, and the most widespread of all diseases. It has been estimated that one-seventh of the mortality of tuberculosis renders it not only difficult to handle, but presents obstacles in the way of its early detection. It kills not by a long-continued systematic poisoning, but by pathological changes, brought about through the localization and growth of the germs in organs necessary to life. To Robert Koch, of Berlin, is the credit due of having isolated the tubercle bacillus. It will be my duty to enter, with some detail, into a description of the features of this disease, and some of the essentials of treating it. Within the last few years our knowledge of the functions of the ductless glands has become much enriched, and we now ascribe to them physiological influences of immense importance. We are but on the threshold of an understanding of their objects and value, but, as in the case of myxedema, the history of which we may be now considered to be fairly well familiar with, there can be little doubt that further research will reveal that each ductless gland fulfills some useful duty in our economy. With this view of the value of the ductless gland in mind, I never could persuade myself that in the treatment of enlarged tonsils a complete excision was altogether wise. I felt that the tonsils fulfill a mission, one part of which was to act as a first line of defense, and, like a military outpost, to resist attacks from hostile forces. Mechnikoff's demonstrations of phagocytosis lends itself to this view. Whatever other functions these glands may have are at present too hypothetical to be discussed. To my mind, each gland represents a fort in which leucocytes are housed, ever watchful to exert a defensive resistance on parasitic micro-organisms. In such a disease as the one under consideration, the leucocyte has an important role to perform, he not only defends but he attacks, for he has the power of taking into his anterior living bacteria and destroying them. In conjunction with this cellular method of defense, which is both phagocytic and chemical, there are other influences at work which are gradually losing their purely speculative character. I refer to the recuperation of the nerve cell after exhaustion and to other evidences of the active implication of the tissues. In the struggle that ensues, sometimes the virulent bacillus wins, and sometimes the leucocyte is victorious, a matter of deep concern to the host; but what the qualities must be to assure success to the leucocyte and prevent the other

*Read by Louis Henry, M.D., Melbourne, before the Victoria Branch of the British Medical Association, August 15, 1900.

agencies of protection of the individual from being overtaxed, is one of the objects which this paper sets itself to explain.

In olden times, to navigate a vessel on a long ocean cruise, when instruments of precision were unknown, was an undertaking of some magnitude. Those mariners who traversed the seas carried with them only their astrolabus, which they used for taking the position of the sun. Observations of the heavenly bodies served them to find the longitude, while a dead reckoning was the only means by which their latitude was ascertainable. But for all this, those ancient sea-fighters, after struggling with unknown currents flowing in devious directions, were not so much out of their course. Their method of navigation was slow, not to say risky, and we cannot withhold our admiration to those pioneers on the sea whose keenness of observation, and whose graphic powers of accurate description have left us but little to add to. Nowadays, with our chronometers, our sextants and quadrants, with our knowledge of ocean currents, with all the armamentarium at our disposal, we certainly have reaped a large field of research, gathering abundant harvests and enabling us to bring the most distant countries into touch and unite mankind in one brotherhood. And so the physician of today should not be ungrateful to those pioneers of medical science who, reliant up on their own independent research, and frequently without co-operation, have contributed so largely in establishing the foundation of that great storehouse of knowledge from which we gladly borrow the fundamental principles of our art. In no affection will the broad principles of treatment based upon sound pathology stand out more prominently, and in no instance in the realm of medical therapeutics will the value of intelligent guidance on the part of the physician be more conspicuous than in the handling of tuberculosis. The utility of narrow limits of ideas by a treatment of antiseptics or specific remedies may, for a time, be apparently successful in treating special symptoms, but they are after all only palliative, and the results, it will be found, are only purchased at a heavy cost. Something must be sacrificed at the expense of temporary relief. The food intake will be less, the appetite becomes diminished, nutrition must suffer, and one of the chief agencies of treatment is constantly hampered. The great ideal to be arrived at in treatment, it will be seen, is to invigorate the patient's power of successful resistance, to stimulate the vitality of the individual to rapid assimilation and repair, and to keep the mucous surfaces normal. These objects, in conjunction with oxygenation of the blood, a good metabolism, a natural excretion, are the principles which must direct treatment in arresting disease and promoting general health. We must discard the idea of the disease being the entity; it is the patient who must be paramount.

In a paper read before this branch in 1892 Mr. Candler observed that an effective system for prevention of consumption is not to be devised

without the full knowledge of its causation. Koch's historical address was delivered in 1882, at Berlin. In every step connected with the discovery of the tubercle bacillus, and with the experimental proof that the species is the infective agent in tuberculosis, is seen the work of the most consummate micropathologist of the day. The parasitic nature of the tubercular virus having been accepted, some inquiries may be made—Firstly, where do the parasites originate? Secondly, how do they gain an entrance into the body? As the result of his experiments Koch declared that the tubercle bacillus could grow only between the temperatures of 86 and 105.8 degrees F. Under 86 degrees F., and at 107.6 degrees F., no growth took place during three week's time. It follows that the tubercle bacillus, in its process of development, is limited to the animal body; moreover, it is not an accident, but a true parasite, that can originate only in an animal organism. How do the parasites enter the body? The majority of all cases of tuberculosis have their beginning in the respiratory tract, and the infectious material becomes apparent in the lung or bronchial gland. It is therefore very probable that the bacilli are inhaled into the lungs by particles of dust. The manner and way in which the bacilli become mixed with the air is not so very mysterious, particularly when we consider the quantity of bacilli in pulmonary cavities, which, mixed with other organisms, are expectorated and disseminated all round. Sputum, after drying, does not lose any of its virulence, and entering the lungs as dust, it is the cause of tuberculosis.

Koch states that the tubercular organism finds conditions suitable for its existence only in the animal body, and that it cannot exist under ordinary conditions outside of it. As a prophylaxis he lays great stress on the recommendation that those sources from which the material of infection come should be closed, the chief of which is the sputum.

In 1887, and again in 1892, Mr. Candler published his ideas of what he considered a radical error in Koch's views of phthisis. He says, "that because Koch did not succeed in getting the bacilli to grow below 86 degrees F., it was absurd for him to suppose that no other micropathologist would succeed." Mr. Candler believed it quite possible for the bacillus to grow outside the animal organism, and he discarded the idea of the purely parasitic character of tuberculosis. It is his opinion that this specific vegetation occurs naturally in the flora of most habitable regions of the globe, and is carried by means of the air into the dwellings of man and animal. It then establishes itself on suitable soil, and it is by means of breathing air containing the seeds of the growing saprophytic vegetation, and not by inhaling an atmosphere holding the diseased spores of the parisitic stage of the species, that phthisis is contracted.

Although Koch believed that the tubercle bacilli would grow only in media containing animal fluids outside the animal body, not below 86 degrees F., it was shown by Pawlowsky that growth will take place also

on a purely vegetable medium. Sander discovered that growth took place in potato broth even at 71.6 degrees F. and 73.4 degrees F. While it seems doubtul whether nature can supply all the necessary conditions for the growth of the bacilli, there is every evidence to show that their great culture-ground is the animal body, and the agencies by which tuberculosis is spread are the secretions.

The power of resistance of the tubercle bacilli is very considerable, and outside the body they are quite able to sustain their vitality for a very long period. The action of direct sunlight is rapidly fatal to them, and they are able, in the dried condition, to resist a fairly high temperature.

The chief methods of infection are by inhalation and ingestion of food contaminated with tubercle material.

The whole of the field of bacteriological inquiry leaves still room for further research, but this much has been learnt that pulmonary tuberculosis is a mixed infection. It is quite possible to become confused with the innumerable classifications of this disease, for one is in great danger of losing sight of that unity of principle with diversity of result, which underlies and explains the varying aspects of phthisical and chronic diseases of the lungs. One of the best definitions of consumption, although it practically excludes miliary tuberculosis, is that of Sir Andrew Clarke; it is as follows: "An assemblage and progression of symptoms associated with, and dependent upon the ulcerative or suppurative destruction of a more or less circumscribed, non-malignant deposit in the lungs." I desire to quote another definition, possibly more comprehensive: "The tubercular bacilli excite at the place of localization the formation of small granulations, tumors, tubercles." These consist of an accumulation of leucocytes and hyperplastic fixed cells of the tissues. These tubercle nodules undergo necrosis (caseation) and disintegration, leaving ulcerous areas that extend and become confluent, so that the affected organ is gradually destroyed. Frequently the tuberculous ulcer becomes the seat of secondary infection (mixed infection), with pyogenic cocci and other micro-organisms, which in turn bring about secondary inflammatory processes (infiltrations, septic diseases). The cure of the tuberculous process takes place through absorption, connective-tissue hyperplasia (cicatrization), and calcification.

As a rule, tuberculosis is a localized infection, and may begin by infecting the pharyngeal tissues, tonsils, the lymphatic glands of the neck, lungs, intestinal tract, bones or skin. The infection of the larynx is usually secondary to that of the lung, and very often there exist cryptogenetic foci deep down in the parenchyma of some organ such as the intestinal glands, fallopian tubes, etc., where the bacilli may remain latent for a longer or shorter period. The most frequent form of infection, however, is in the lung, usually in the upper part, or more frequently in the left apex. Acute miliary tuberculosis is a generalized condition

where various viscera are implicated, due probably to the rupture of some localized focus containing large quantities of living bacilli, which, pouring into the blood stream, spread in various directions throughout the system. Individuality and a predisposition to tuberculosis are admitted to exist. This predisposition may consist in some constitutional weakness, in a tendency of the tissues to catarrhal troubles, in some lesion of the mucous surfaces, in some mal-development of the thorax or in some other obscure cause. It is not at all unusual for the tubercular process to remain local. This may be due to arrest of growth and possibly some restraint in development, owing to a healthy resistance on the part of the invaded tissues. The presence of tubercle bacilli in milk is detected by centrifugalizing the milk and then by examining the deposit microscopically or by inoculating an animal with the deposit. It is this infected milk which is the greatest sources of tabes mesenterica in children. Swallowing sputa will give rise to intestinal infection in adults.

A difference of opinion still exists among many as to the unity or duality of the origin of consumption. Neimeyer is the exponent of the dual theory. Laênnec is the champion of the monistic cause, and he states that pulmonary phthisis is a constitutional disease, and that it never can develop itself out of acute or chronic pneumonia, or take its rise from a bronchial hemorrhage, or from a neglected or protracted cold. Neimeyer teaches that consumption is not, in all instances, due to a specific growth, but may arise in two different ways. According to him, consumption and phthisis are synonymous terms which describe the lung affection. He restricts the term tuberculosis to a much narrower field, allowing its application to only that form of phthisis which includes a deposit in the lung of the specific new growth which he calls miliary tubercle. Inflammation of the lungs, and its termination in cheesy metamorphosis is the one cause, and the development of the tubercle (miliary tubercle) is the other. He declares that the large cheesy masses, which break down and form cavities, are not tubercular, but result from purely inflammatory processes. He holds that consumption is more often due to chronic catarrhal pneumonia than to any other one cause. The second form is that in which "tuberculosis has associated itself with the phthisis." Tubercles, he goes on to say, are generally a secondary product, and tuberculosis is mostly secondary to the action of cheesy, morbid products. He further dogmatizes as follows: "The greatest danger to most phthisical patients is the development of tubercles." Primary tuberculosis, according to him, is a new growth. After insisting upon the curability of many cases of consumption, he says, "Against that form of phthisis, which consists in a primary tuberculosis, as well as against the tuberculosis which has been developed in the course of phthisis, treatment is indeed potent." Although Niemeyer's contributions towards medical science have received every acknowledgment and

must not be underestimated, still, examined by the light of modern investigation, his train of argument will not hold, and his conclusions cannot altogether be accepted. Koch's discovery renders it almost impossible to believe in the duality theory. At present Koch's dictum is to the effect that consumption of the lungs is the result of a specific new growth, which is caused by the bacillus tuberculosis.

Opponents to this doctrine declare that it is inadequate to explain all the phenomena of tuberculosis. Sir Andrew Clarke makes the following remarks: "It has been alleged by Koch—and is generally believed in London—that every case of phthisis is microbic, and is associated with and dependent upon the presence and the action of tubercle bacilli. I presume to deny the allegation, and to contend that whilst the great majority of cases of phthisis are bacillary, there is a considerable minority of cases which are non-bacillary, in which at no period of their history can bacilli be found." Many reliable clinicians assert the same. Dr. Meigs expresses it as his opinion "that it is impossible to escape the conviction that there are cases of consumption, especially some of the more chronic forms, and usually classed as fibroid phthisis, that cannot possibly be due to either the bacillus or to any other infectious cause. These cases must arise from some disordered action of the bodily organism itself, or, to be more precise, that they result from inflammatory action—inflammation being given a broad definition, making it cover that which occurs in the tissues after a great variety of forms of injury —a result of ill-ordered growth and disintegration of the natural component parts of the organism."

The prognosis admits of a more hopeful view than was formerly possible. The treatment now followed is based on a precise pathology. Our chief aim, as it is now in many other diseases, is to increase the tissue resistance of the individual—to improve his vitality—to place him in an environment which will both help to neutralize the attack and to raise the patient's mental and physical tone. Alcohol habits increase a susceptibility to contract phthisis. Pregnancy retards changes in the lung, while lactation aggravates it, and so quickly may phthisis come after parturition that many deaths from consumpion are put down to childbirth. Diarrhea, as a consequence of tuberculous enteritis, and laryngeal tuberculosis, are both grave symptoms. Edema and thrombosis of the veins of the legs and aphthous stomatitis portend the end. In this disease, as in many others, debility and diminished tissue-resisting powers of the body permit of fresh invasion from both within and without, and so induce composite symptoms of a fresh series of apparently independent diseases.

Actual hereditary infection is brought about by the transmission of the bacillus from parent to embryo. The infection may occur by the passage of the bacillus through the placenta; by the infection of the

ovum from the internal tissues or fluids; by infection carried in the fructifying sperms. By whichever means the infection is brought about, the cavity of the bacillus may remain latent in the individual till some cause provokes it out of its quiescent stage. Intra-uterine infection, however, is rare, but its possibility is borne out by careful investigations, more particularly in experiments on animals. Much of what at one time was thought to be inherited phthisis is to be regarded as not in any way due to direct transmission, but is the result of effects of the same environment on the individual, and proceeding from direct infection by the inhalation of phthisical dust and from the general contamination unavoidably associated with living in an infected atmosphere. The offspring in this way acquires the disease, as his own resisting power becomes weakened, whereas the same individual, if removed timely to healthy surroundings, and away from transmitting centers of infection, would escape altogether. Parents should be taught that it is not by inheritance, but by infection, that the disease is spread, and they should be urged to take timely precautions to save the family.

The earlier symptoms of pulmonary consumption are very often attended with difficulties of diagnosis. Long before physical signs in the lung become sufficiently accentuated, incipient disease may exist. There may be no expectoration for bacteriological tests, and, in fact, no objective condition to help one. The temperature may be normal, and nothing but subjective complaints be heard of. Very suggestive of the approach of disease are evidences of dyspepsia, slight hoarseness, loss of weight, a sense of weariness, a want of recuperative power, and, in fact, a general feeling of malaise. Cough is not an early symptom, but diarrhea may be. Acute pleuritic effusion is always suspicious, and very often anemia may be the only clinical sign. At a very early period auscultation may distinguish prolonged expiration due to a loss of elasticity of the lung. The alteration of the percussion note follows, and fine moist râles may now be heard. The sub-clavicular dulness, the amphoric breathing, etc., are all symptoms of later stages. In the primary stage dulness is not obtainable for the small tubercles, and the circumscribed pneumonic patches affect only separate lobules or alveoli, so that the percussion note of the chest is barely affected. When, however, lobules lying together become densified, it is possible to recognize a dulness in tone. A large cavity at the apex may be a cause of dulness, as these cavities are frequently surrounded by fibrous tissue, which may be adherent to the chest wall; these cases offer a favorable prognosis. When, however, the dulness is less marked, and is accompanied by prolonged expiration, râles, fever, and wasting, the prognosis is bad.

A recent case under my own observation presented itself with all the difficulties of obscure origin, and with almost complete absence of all specific physical signs. X. Z., aged forty-six, had rigors, neuritis of the

scalp, dyspepsia with vomiting, and pains in ankles and knees. Pulmonary symptoms were not detectable; there was no deviation from the normal temperature until a fortnight after the first rigor. The first indication of pyrexia was an evening temperature of 100 degrees, and from that period for fully ten weeks the temperature fluctuated up and down—the morning temperature between normal and 100 degrees, and evening rises between 101 and 103 degrees F. The pulse itself, in the horizontal position, varied between 70 and 100, and beyond the pains already mentioned no other manifestations were evident. On account of the total absence of both subjective and objective pulmonary symptoms, the diagnosis was presumed as being influenza of a rheumatic and typhoidal character; one reason for favoring influenza was the protean type of the attack. Auscultation with the binaural stethoscope detected a difference in the respiratory sound of the two lungs. From the very first day of my examination of the patient, I was suspicious of the respiratory murmur of the middle lobe of the right lung, but no development of this condition was manifest. There was no cough, no pain in the side and beyond the pyrexia, rheumatic pains and coated tongue there was nothing to show. The resonance of the lung was not diminished, nor was fremitus increased. It was only at the end of eight weeks, after frequent examinations of the blood for typhoid by Widal's test, which were negative, that my first impression of implication of the lung was corroborated. About this time the patient showed another objective symptom, which, however, in itself could not be taken as pathognomonic, namely, day and night sweats with slight wasting. There was nothing for bacteriological examination, there was no other indication of possible tubercular infection. Taking, however, the whole character of the case, I was encouraged to favor the idea of it being tubercular, and although the night temperature still occasionally went over the 100 degrees, I ordered his removal away from home to a more favorable climate, and gave instructions for the carrying out, in a modified form, of the open-air treatment. Long before this I had begun to feed the patient with nutritious food. The result of this treatment has been eminently saisfactory. He is increasing rapidly in weight, he is able to take outdoor exercise, to do a little shooting, and for days at a time his temperature remains quite normal. Exacerbations occur occasionally, when he presumes too much on his strength and indulges in overexertion. Other cases which I have had have given me every encouragement to persevere in recommending a similar mode of treatment.

One of the most powerful means of combating the tubercle bacilli is fresh air. The patient must be rescued from all elements of depression, from atmospheres permeated with the products of respiration, and from dust, and he must be continuously exposed to pure air, both during day and night. The temperature of the air itself is not of such importance

as its purity, neither is barometrical pressure anything but of secondary importance. Brightness and sunshine are factors to be sought so that outdoor life may be conveniently and comfortably entertained. Cough and expectoration should not be checked altogether, and while neither should be unduly controlled, still, if distressing and harassing, must be relieved. Exertion and fatigue are to be watched, as both are liable to induce aggravation of temperature. Fever must be treated by rational methods, and powerful antipyretic drugs are to be avoided as useless and lowering. All debilitating causes are to be investigated and attended to. The condition of the stomach must be enquired into, and, hand in hand with the importance of free air, a form of nourishment, suitable to the patient, is to be advised. In this manner, where the disease is of a limited extent, it may be arrested, early aggravations are checked and the patient is placed in the most favorable circumstances for his recovery. There is no chapter in the whole realm of medicine where the medical attendant is called upon to exercise a keener judgment, founded on accurate observation, and where, realizing the full responsibility of his duties, he is better able to take advantage of a rich experience and obtain a gratifying result. To sum up, attention should be directed to digestion, to food, to free oxygenation of the blood by means of fresh air. The normal resistance of the tissues to be regained, catarrh and local congestion are to be thrown off, and the soundness of the mucous surfaces preserved. Pathologically speaking, the treatment consists in the observation of strict hygienic influences which have the effect of inhibiting active destructive processes in the lung, such as subacute consolidation, softening, caseation, and ulceration. That such effects in arresting the disease are produced is known to all those in the habit of making post-mortem examinations.

Nature shows its method of reparation by throwing out a fibrous material as a first process of regeneration. A natural protection is thus afforded, cicatrization is encouraged, necrosis is checked, and ulcerations heal. The further effect of fibrosis is the encapsuling of the foci and the culture beds of the tubercle bacilli, so that they practically die in their own toxins. Sometimes it happens that the diseased material becomes converted into a calcified and calcareous mass. At any time, however, owing to lowered health or accident, an enclosure may rupture, then a fresh invasion takes place. We must not overlook the fact that fibrosis may outrun its usefulness by limiting the respiratory power by its interference with the elasticity of the alveoli. Fibrosis is therefore not an unmixed good and its activity requires watching.

The principle of the treatment adopted by Dr. Walther, at the Nordrach Sanatorium, is as follows: Hemoptysis is regarded as an accident and treated as such. Fever is not considered as a contraindication for food, and improvement of nutrition is considered as a key to the

situation. Each case is treated according to its individuality. Food is directed to be given as much as possible, exercise is ordered in a systematic manner, as it improves condition and throws into activity the healthy part of the lungs, and so the circulation and respiration is encouraged, and as occupations of a cheerful nature are indulged in, brooding is avoided. When pursuing this treatment, clothing should be worn of a warm and light texture, and good flannel next to the skin is preferable to any other material.

The following is the regimen:—

Breakfast at 8 a. m.—Tea or coffee, cold tongue, ham, fowl or sausage, bread and butter (with plenty of the latter), and one pint of milk.

Dinner at 1 p. m.—First course: fish, fowl, or meat. Second course: fowl or meat. With both courses a liberal supply of potatoes, vegetables, and gravy or sauce, with butter as a main ingredient. Third course: Fruit with biscuits, nuts, etc.—say three times weekly. The other days pastry, milk puddings, ices, etc., with coffee and one pint of milk.

Supper at 7 p. m.—One hot course as at dinner, potatoes and vegetables included, and one cold course as at breakfast, with bread, butter and tea, with one pint of milk.

The patient must weigh every week. It is advisable for him: (1) to eat as much as possible at meals and nothing between while; (2) to have a long interval between meals, so as to allow a complete assimilation of food; (3) to take one hour's rest, reclining on a sofa or in a hammock, before dinner and supper. Smoking is allowed in the open air.

Regulation of Exertion and Rest.—The patient must be entirely guided by the condition of his temperature in this matter. Temperature to be taken on each occasion in the rectum, preferably on waking in the morning, then after the morning walk (or if resting, at 11:30), again after the afternoon walk (or if resting, at 5:30), and at night ten minutes after retiring to bed, which should take place at 9 or 9:30. The temperature is to be taken after walking, when exertion ceases the temperature usually drops. If temperature is not over 98.6 degrees in the morning, and is below 100.4 degrees in the evening, after rest, a gentle walk may be taken. If, however, it shows above 98.6 degrees directly after waking up, and if it reaches 100.4 degrees, or even 100 in the afternoon after rest, it is too high, and the patient must have complete rest on the sofa each day until the temperature comes down. When the patient is at rest, and the temperature reaches over 100.4 degrees in the evening, it indicates that he needs absolute rest in bed and alone in his room. Under these circumstances even talking is to be avoided. The same quantity of food is to be taken when in bed with fever as when about. The more food taken the sooner will the fever abate. If the morning temperature keeps up regularly below 98.6 degrees, a short walk (say half a

mile), at a uniformly very slow pace, may be taken before breakfast. If after this exercise the temperature rises above 100.4 degrees, then the walk has been too long, and rest must be taken on the sofa for the remainder of the day. Patients may read, but not fatigue themselves in any way. The next day a shorter walk is ventured. Then, when the temperature after the walk is well below 100.4 degrees, and if no fatigue is felt, a short stroll may be taken in the afternoon after dinner. The repetition of this is governed by the temperature obtained on returning from the walk. As strength increases the length of the morning walk may be extended. As much time as possible should be spent in the open air. Rain, sleet or snow should not keep the patient indoors. If caught in a shower he should not hurry, breathlessness produced by hurrying is bad. The windows of the rooms and sleeping apartments must always be kept as full open as they will go, day and night, summer or winter, in every kind of weather. The patient need have no fear of catching cold if he will always live in such rooms and avoid those which are heated and close. Cold is caught by infection, not from draughts or wet clothes, which more than the disease cause the coughing. Cough will soon leave when natural open-air life has begun. When resting the patient should sit close to the open window, or in the garden. If the air is cold he should have a rug wrapped round his feet and legs. When walking he should have as little clothing on as possible; he must gradually lay aside all chest-protectors, double flannels, overcoats, etc. The less weight he has to carry the better. He should have ten hours' sleep each night, and must sleep with bedroom windows wide open. If cold he may put more clothing on his bed. Every patient should have a bedroom to himself. He must avoid heated rooms—concert halls, theaters and churches. He must give up dumb-bell and all such suicidal exercises. The bedrooms are well ventilated, and a good draught passes through the bedrooms during the night. In erecting a sanatorium, in selecting a site, you may go to the highlands, or the lowlands, or the bogs; it is of little consequence where you go. It is no use coquetting with climate; the climate has nothing to do with the matter. All that is absolutely necessary is: (1) A spot in the country where pure air is to be had; (2) well away from smoke, dust, traffic, and excitement, where the patient may lead the quiet, unconventional life so necessary to his well-being; (3) the proper treatment to be conscientiously carried out; and (4) the most important of all, the patient to honestly co-operate in attending to all details: (5) the principal outlay of money should be on the patient, and not on the buildings. It matters little whether the sanatorium is at sea-level or on a mountain, whether there be little or no wind, whether the walks be up hill or down hill, only fatigue must be guarded against. It matters not if there be much or little sunshine, whether the rainfall be

high or low, whether the soil is porous or otherwise. All places in the country where pure air is to be had are equally healthful. The ideal place in the country is five or six miles from the nearest village, about 500 feet to 1,000 feet high, protected from the sharp bleak winds by hills, and open to milder currents of air, with plenty of trees, which will afford protection from wind and sun, where good expanse of country is to be had, where the patient may roam freely about. There must be no stinting in the matter of food.

One of the great difficulties of the open-air treatment is the length of time during which it must be carried out. I consider the sanatorium should be erected at an elevation of some hundreds of feet, and away from any town or factory, with a protection from the coldest winds on a good, well-drained soil. Sunlight must be free and accessible, and there should be facilities for walking among trees and sheltered groves; the incline of the paths, if any, should be from the sanatorium. The food should be plentiful, nutritious, and well cooked. The lighting in the household should be by electricity, and a uniform temperature obtained by means of hot-water pipes. Ventilation should be good, and there should be a free admission of sunlight into the house. Everything that harbors dust must be avoided, and facilities for rest must be afforded.

The cows supplying milk should be regularly tested at least every six months. Medicinal treatment should not be excluded altogether, and the value of such therapeutic weapons as iodine, morphia, iodide of potassium, must not be forgotten.

The value of sanatoria is being demonstrated every day. Many of those who have been treated there, providing their stay has been sufficiently prolonged, maintain for many years good health, and are able to resume work.

The value of the treatment at a sanatorium cannot be overestimated, as a visit to a special institute inspires faith and hope in the patient; the patient quickly acclimatizes himself to his new surroundings. Temperature is gradually reduced, the appetite is increased, night sweats disappear, and regular exercise may be taken. I do not claim for the open-air treatment that it will cure all cases, but, without doubt, in those early stages of disease with which we are at present dealing, a much larger percentage is benefited than by any other treatment.

In conclusion, I would like to point out the urgency that exists for making some provision for that large class of patients who suffer unknowingly from those earlier stages of consumption, and who seem still well enough to follow their occupations. In the course of events, they are bound to drift into a less amenable state for treatment. As productive members of the community, and as bread-winners to their families,

they stand, as things now are, very little chance of recovering their usefulness. Their apparently slight ailments which they at first struggle against, appear to them to have neither the significance nor the gravity which we know them to possess. The congested out-patient departments of our hospitals offer them no relief, nor can sufficient time in most instances be given to these cases for correct diagnosis to be arrived at and advice to be tendered. Within reasonable distance of every center of population some public sanatorium should be established, where the attention can be supplied which these cases have a right to demand. In this way only is it possible to save valuable lives for the community, and to apply treatment to those poor unfortunates whose inevitable doom must otherwise lead them on to an incurable stage of their complaint.

The treatment I have attempted to describe comes really under the heading of what might be termed "hygienic" treatment, for its rationale practically depends on the effort of strengthening the organism to effect its own cure. The attempt of destroying the bacilli and neutralizing their products from without, by the administration of chemical germicides, antipyretics, serums, and antitoxins, has superseded in favor of the living tissues accomplishing this work successfully from within. The individual, who surrenders himself to skilled medical supervision, has every reason to be buoyed up, when he can have the assurance made to him that "Nature" has endowed him with all the essentials requisite to produce a curative result.—Australasian Med. Gazette.

THE ANCIENT BELIEF IN THE CONTAGIOUSNESS OF PHTHISIS.

Professor William Osler, in a letter to the British Medical Journal for June 16th, says: "To the contagionists referred to in the interesting article in the British Medical Journal of May 19th should be added Richard Morton, the best seventeenth-century student of phthisis. In the well-known Phthisiologia (1689), speaking of the cause, he says (page 70): 'Nono, Contagium etiam hunc morbum propogat,' etc.; and (page 264), 'Dominus Luff, filius Reverendi Clerici jam ante memorati, atque incola plateæ dictæ Milkstreet, postquam matrimonium contraxerat cum virgine Phthisica (quæ etiam (si bene memini) vitam intra annum a metrimonio completo finiit, cum colliquatione universali, et reliquis Phthiseos pulmonaris funestæ symptomatis) in Phthisin etiam , ex contagio, uti mihi videbatur, post paucos menses elapsos incidit.'"—New York Medical Journal.

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Wounds of the Heart.

Dr. L. L. Hill, of Montgomery, read a paper on "Wounds of the Heart" before the Jefferson County Medical Society November 12, 1900. After calling attention to the prediction made some time ago by eminent surgeons, that the limit of surgical advances had been about reached, and of the refusal of surgery to continue to advance and improve, he called special attention to the advances made in the treatment of injuries of the heart. Injuries of this organ, which had for so long been considered necessarily fatal, had been found to recover, and he cited several cases where bullets had been imbedded in the pericardium, and where the patient lived for years.

Encouraged by these cases, surgeons began active interference in these wounds, and he gave a careful analysis of the seventeen cases of heart-suture which have been recorded, and of these seven recovered. In his own practice he had treated two cases. In one case a pin had been driven into the heart near the apex, and its movement could be seen with each

beat of the heart. The pin was removed, and the patient recovered. In the other case there was a stab wound in the fourth intercostal space near the nipple. The pericardium was filled with blood, and was drained. The patient recovered. In the seventeen cases reported, some were operated on with anesthesia, and some without anesthesia. In some the pericardium was sutured; in others drained.

The paper was an unusually interesting one, and elicited considerable discussion.

Southern Surgical and Gynecological Society.

The thirteenth annual session of the Southern Surgical and Gynecological Association met in the Kimball house, Atlanta, Ga., on Nov. 13.

The President, Dr. Cartledge, called the meeting to order.

The first paper was "Anæsthesia by Subarachnoid Injection of Cocaine," by Dr. Rodman, of Philadelphia. The doctor had tried this method in quite a number of cases, and had had very few bad results and no very alarming symptoms immediately after the injection. He thought there were limitations to its use, and that where chloroform or ether can be used he did not employ the injections.

Dr. McMurty, of Louisville, thought chloroform and ether would be much safer than they are if more competent hands used them. He had had no personal experience with the injection, but was afraid to use it when general anæsthesia could be employed.

Dr. McDonald, of Albany, had recently returned from Europe, and had seen Kocher inject many cases, so he tried it on a patient whom he thought would not take general anæsthesia well. The operation to be done was for hemorrhoids. He injected 18m. of 2 per cent sol. cocaine in the subdural space, and anæsthesia was complete in ten minutes. He started the operation, but was stopped in a few seconds by his assistant telling him that the patient's pulse was very weak and fast. The patient became cyanosed; pulse ran up to 160, then became imperceptible; respiration went up to 60. He used saline infusion and all other means of restoring patient, who finally recovered, and the operation was done three days after under gas.

So Dr. McDonald is very much displeased with his experience with this method. Dr. Cartledge had used the method with satisfaction, and was rather favorably impressed with its use. Dr. Powell, of New York, did not think it a safe method to employ, especially as it was very hard for every one to carry out the necessary antiseptic technique to avoid infection. He thought it might be used in some cases, but was inclined to think it would never become widely used. Dr. Rodman did not want to claim too much for this method, but his experience had been such that he might be too enthusiastic over the method.

The next paper was by Dr. Howard A. Kelly, on "A New Method of Treating Fibroid Uteri, complicated with Inflammatory Pelvic Diseases." The point he brought out was to bisect the uterus so as to bring it up in reach and give more room to work.

Dr. Johnston, of Richmond, Va., then read a paper on "Osteo-Fibro Myoma," and showed specimen of case he had operated on.

Dr. F. W. McRae then read a paper on "Appendicitis in the Female," showing how often trouble with the appendix was mistaken for tubal and ovarian diseases. This point was discussed at length and its importance recognized.

Dr. Long, of North Carolina, then read an interesting paper on "Drainage in Abdominal Surgery." He wanted to get the opinion of the surgeons as to what cases should and should not be drained. In the discussion all agreed that many cases had been drained in their practice that would have progressed better without it. The growing tendency was to only drain cases in which there was a septic condition to deal with, deciding that the peritoneum could take care of a moderate amount of blood and fluid.

Dr. Geo. H. Noble, of Atlanta, read an interesting paper on "Flap Operation for Atresia of the Vagina," with splendid illustrations of his operation.

Dr. Englemann, of Boston, read a learned paper on "Normal Menstruation."

Dr. McDonald, of Albany, read a paper on "Improved Methods of Operating for Cancer of Stomach." By his method and instruments the operation has been very much shortened and simplified.

Dr. Bovie, of Washington, D. C., reported a case in which he cured a marked rectal prolapse in a woman by fixing uterus to abdominal wall. Dr. Powell then explained his method of curing prolapse by running an adhesive strap from one groin to the other, passing across tube ischor, which he claims to be an infallible method, affording quick relief. This strap is applied with patient lying on abdomen, and should be changed after each act of defacation as it gets soiled.

Dr. Seneca D. Powell read a long and comprehensive paper on "Carbolic Acid in Surgery." The doctor has had great success in locating septic causes with this agent. He employs the 95 per cent. acid made by Talbot, of England, and stops its action with alcohol. The doctor explained at length the different kinds of cases that were benefited by carbolic acid. The paper was liberally discussed, some claiming that the danger of gangrene was so great with its use that they were afraid to employ it. Some reported gangrene from the application of a 2 per cent. solution; but Dr. Powell, in his extensive use of it, has had no bad results, and few cases of evidence of poison.

Dr. Westmoreland read a paper on "Early Excision in Cases of Dislocation not Reducable by Manipulation," showing specimen of head of humerus, which he had excised and in which case he got splendid motion in arm, patient being able to perform any of the ordinary duties of life. The doctor advised excision in all cases where the reduction could not be accomplished without extensive injury to the soft parts. Dr. Sanchon said all cases should be reduced where the glenoid cavity had not so filled up as to make impossible the replacing of the head of the bone, in which case excision was to be employed. He also laid stress on early movements after excision in order to maintain mobility. Dr. J. D. S. Davis said he had had very few cases in which reduction could not be accomplished. Dr. G. S. Brown thought there were cases in which the glenoid was filled out with blood clots and unorganized exudates that might be removed and the head of the bone replaced.

Next in the order of business was the President's address, by Dr. A. M. Cartledge, who made some valuable suggestions along the lines of modern surgery.

Dr. J. T. Jelks read an interesting and instructive paper on "Autointoxication in Defective Kidney Elimination, With and Without Nephritis." This subject is recognized by every one as being one of vast importance and deserving greater study than has been generally given it.

Dr. Geo. S. Brown made supplementary reports of two interesting cases which have been under his treatment for some time past; one a case of lithotipaxy, the other of vesico-rectal fistula, in both of which cases he has gotten good results.

Dr. Kelly recommended a new method of removing gall-stones where an abdominal incision had already been made large enough to introduce the whole hand by pressing the stone up against the abdominal wall and cutting down on it, then sewing up the incision. Dr. W. E. B. Davis did not think it a good idea in all cases to subject patient to the traumatism of examining the gall bladder, and did not advocate the method of operating on the gall bladder. Dr. Cartledge did not think it a good idea to cut down on the gall bladder in this manner, with no protection to the cavity.

There were other valuable papers read and discussed, and the meeting was considered quite a success.

Dr. Hoke, of Atlanta, by invitation of Dr. Davis, read quite an interesting paper, and showed plates of a condition of bony deposit and anchylosis of spinal column.

Dr. W. E. B. Davis, who has labored so hard to make the Association one of the best in this country, and who has served as its secretary since its foundation, resigned the secretaryship on account of increased professional duties. Dr. Geo. Ben Johnston was chosen to draft an expres-

sion of appreciation of Dr. Davis' services to the Association, to be published in the Transaction of the Association.

The following officers were elected for the following year: President, Dr. Manning Simons, of Charlotte, S. C.; Vice Presidents, Dr. W. P. Nicholson, Atlanta, Ga., and Dr. Boscher, Richmond, Va.; Secretary, Dr. W. D. Haggard, Jr.; Treasurer, Dr. Floyd McRae, Atlanta, Ga.

The physicians of Atlanta are to be congratulated on the splendid manner in which they entertained the visiting physicians.

Death of Dr. Griggs.

Dr. John Gardner Griggs, of this city, who died suddenly at the residence of his daughter, Mrs. J. B. Dryer, Sunday morning, October 21st, 1900, was the last remaining member of a family of five brothers and two sisters, his last brother, Dr. A. W. Griggs, of West Point, Ga., a very eminent physician, having died about two months ago.

Dr. Griggs was born in Harris County, Georgia, in 1830, and had therefore attained to the full measure of the allotted three score years and ten. He joined the Baptist church in his boyhood, and remained a member of that church during the balance of his life. He was educated in one of the most thoroughly conducted high schools in his native State, and after a course of preparatory study, with the lamented Dr. Ridley, of LaGrange, Ga., he then entered a course of medical lectures in Charleston, S. C., and afterward graduated in the full medical course from the University of Pennsylvania in 1853. Returning to his native State, he married in the following year Miss Sarah Eliza Neal, of Talbot County, Georgia.

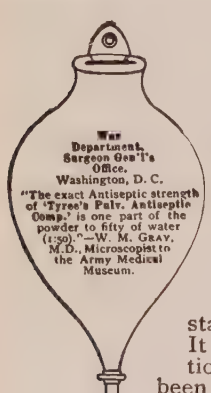
After practicing a few years in Georgia, he removed, in 1860, to Tuskegee, Macon County, Alabama. At the beginning of the war he enlisted as a private in an Alabama company, but was immediately transferred to the position of surgeon, in charge of the Fifth Georgia Regiment, the successes and reverses of which he followed until Lee's surrender, being at that time in Atlanta with his hospital awaiting further orders. So marvelous was his physical endurance that all the hardships and privations of army life and the unremitting duties of surgeon, performed with unfailing energy, tenderness and cheerfulness, left no traces on his wonderful constitution.

Returning to Tuskegee after the war, he resumed his practice, and for thirty years was the greatly beloved physician of a very large circle. Removing to Birmingham in 1887, he shortly afterwards had a severe attack of grip, with complications from which he never fully recovered, having been almost an invalid, patient and perfectly uncomplaining, for twelve years. Those who loved him and watched him carefully have noted his failing strength for many months, but his death was wholly

unexpected, as he arose as usual, read his morning paper, talked pleasantly with the different members of his family, and not five minutes after having spoken to some of them, was found on his bed, where he had just expired, his countenance bearing no expression but that of perfect peace.

He leaves surviving him his wife and two sons, Mr. Howard Griggs, of Talladega, and Mr. John Griggs, of Warrior, and four daughters, Miss Leila Griggs, Mrs. J. B. Dryer, Mrs. James Bailey and Mrs. E. J. Smyer, all of Birminhgam, another daughter, Miss Nettie Griggs, having preceded her father in her departure from this life about eighteen months ago.

The very wide-awake editor of the Philadelphia Medical Journal, visiting a "spice factory," observed that "hundreds of tons of marble chippings were being pulverized and used in the manufacture of all sorts of ground spices." Floor sweepings of such factories, he learned, were regular articles of commerce.—Ex.



USE AND ABUSE OF THE DOUCHE.

That appropriate agents as well as appropriate cases are necessary to make the use of the douche beneficial in the treatment of diseases of the female genital mucous membrane, is a point which should be borne in mind. Medicated solutions, for the purpose of freeing the surface of retained secretions or retarding the extension of inflammation, must be considered from two standpoints: That of cleansing and for their local therapeutic action. It has been the custom heretofore to first cleanse with alkaline solution, then treat antiseptically. A complicated process which has been simplified by the introduction of Tyree's Antiseptic Powder, a preparation possessing both cleansing and antiseptic properties in one which through its modified alkaline actions dispels all accumulation of retained secretions and prepares the glandular surface for the bland healing and refreshing antiseptic properties characteristic of this product only, which, unlike the antiseptics and cleansing salts of more powerful potency, it never produces a dryness of the mucous lining which makes urinating painful and swelling a certainty. Frequent microscopical examinations after the use of this powder in solution prove that it had a decidedly salutory effect in contracting the over-distended capillaries, thus bringing about a healthy reaction by which the mucous membrane is enabled to throw off the imbedded micro-organism.

J. S. TYREE, CHEMIST, WASHINGTON, D. C.

FORMULA.—Parts: Soda, Bor., Alumen., Ac. Carbol., Glycerin, the cryst. principles of Thyme, Eucalyptus, Gaultheria, and Mentha. DIRECTIONS.—One or two teaspoonfuls to a pint of water three or four times a day. ½ lb. with clinical reports for 80 cents.

Miscellaneous Notes.

New Orleans Polyclinic.—Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery. The specialties are fully taught, particularly laboratory work. Fourteenth annual session opens November 12, 1900. For further information address Dr. Isadore Dyer, Secretary, New Orleans Polyclinic, New Orleans, La.

Subscribers will greatly favor us by remitting the amount due on subscription.

We call attention to the new advertisements in this issue of the Journal.

Dr. N. J. W. Peters has located in this city. Office, No. 256 Hood Building, on Twentieth street.

Married Wednesday, November 7, 1900, Dr. W. P. McAdory, of Birmingham, to Miss Lillie Hunt, of East Lake, Ala.

After a dinner at a Chicago dental school, a number of students were sick, some of them very serious. Canned salmon is believed to have been the cause.

Dr. T. W. Ayers, of Anniston, has accepted a position tendered him by the Southern Baptist Convention, and will go to China and take charge of a hospital.

During the ten days of the State Fair, which was held in the city of Birmingham, we were glad to meet a large number of doctors from this and other States.

Drs. L. L. Hill and A. H. Montgomery, of Montgomery, Ala., were in the city on the evening of the 12th of this month, and attended a meeting of the Jefferson County Medical Society.

The Transactions of the Medical Association of Alabama are being sent to the members. The book is a little late getting out, but this could not be avoided. We are quite sure that this volume compares favorably with any which has been issued, if indeed, it is not the best ever published.

A very disastrous fire in New York made one of our patrons a sufferer. The M. J. Breitenboch Co. was a heavy loser, but the medical profession will be glad to know that they will go right on with business. Their strict integrity, their honest business methods, and excellent preparations have secured for them the most favorable consideration from the doctors of this country. Gude's Pepto Mangan, a preparation which has given such satisfactory results in the hands of so many physicians, will be supplied as heretofore.

"Coca" has maintained its reputation as a powerful nerve stimulant, being used with good results in nervous debility, opium and alcohol habit, etc. The highly variable character of the commercial drug makes it uncertain, however. Robinson's Wine Coca we believe to be a uniformly active article, it being prepared from assayed leaves, the percentage of Cocaine being always determined by careful assay.

Martin H. Smith Co., 68 Murray St., New York.:

Dear Sirs—Permit me to thank you deeply for the courtesy shown to me. The Ergoapiol (Smith) worked like a charm, and I am more than pleased with it. There was not the slightest pain accompanying the last menstrual period, and the flow greatly diminished without, also, any feeling of after weakness. You can imagine our gratitude to you when she has had to endure pains, heretofore full as severe as those during labor.

Again thanking you and assuring you we shall always laud Ergoapiol (Smith), I remain, Yours truly, JOHN MEARS,

Med. Examiner Pacific Mutual Life Ins. Co.

J. J. Grant, M. D., Monticello, Fla., says: I find nothing in the materia medica to equal Aletris Cordial in uterine diseases. I have used it in a very obstinate case, which outstood several important remedies. When I put the patient on Aletris Cordial every diseased symptom disappeared in a week's trial. I have used it in several cases, and can, therefore, say that it is an active and powerful agent for diseases of the womb.

For the past three years I have been using Viskolein in malaria-typhoid fever, commonly known as "slow fever," "long fever," "bilious fever," "bilious remittent fever," etc., also pneumonia and la grippe. I am free to confess that I have yet to find an agent in the therapeutical kingdom to equal it. Before I began the use of Viskolein, it was very seldom I stopped the fever before the twenty-eighth day, and frequently it was sixty and ninety days. With the use of Viskolein, the duration of the fever is from five to eight days, even though they may have every

symptom of typhoid and the attacks ever so violent. I seldom fail to control the temperature with the use of it. Viskolein is my great standby in all forms of fevers, either pernicious or essential. My brother doctors wonder why I do not lose a patient. It is because I use Viskolein. I never expect to be without it. J. Valarus Bonnette, M. D.,
Pollock, La.

WORTHY OF NOTE.

The recent development in experimental pathology and therapeutics shed a flood of light upon a well-established clinical fact, i. e., that most cases of general debility associated with impoverishment of blood, tissue and nervous force are benefited by the ordinarily employed tonics, iron, arsenic, strychnine, etc. Precise methods of investigation show that the essential feature of anemia, nervous exhaustion and malnutrition is a failure on the part of Nature to rebuild tissue and force as fast as they are consumed by the physiologic functions. Iron, arsenic, strychnine, etc., can never bring about the process of metabolic equilibrium. What Nature needs is help—help along the same lines by which she herself maintains the balance of waste and repair.

Gray's Glycerine Tonic Comp. is uniformly effective because it duplicates and reinforces Nature's methods. This remedy is primarily a stimulant to normal nutritive processes; it begins aright by coaxing atonic, functionless digestive organs to resume their normal work—enables them to digest and assimilate exactly what Nature needs—food for blood, tissue and nervous force. It is an invariably effective remedy in anæmia, nervous exhaustion and malnutrition from whatever cause.

TREATMENT OF WHOOPING-COUGH.

Godshaw (Medical Progress, August, 1899), laments the fact that, notwithstanding persistent study and experimentation, we do not possess any reliable means for cutting short an attack of whooping-cough. The best treatment will do no more than palliate symptoms and diminish the frequency and severity of the paroxysms of coughing. This, however, is very beneficial and frequently essential, especially during the night. An opiate, when carefully selected, will yield the desired results without doing harm probably better than any other drug. Papine is the best, and should be given in doses of five to ten drops to an infant one year old. Older patients will require proportionately larger doses. The object should always be to lessen coughing that the child may be able to sleep, and not to produce sleep. Some physicians rely chiefly upon antispasmodics—belladonna, bromides, asafetida, etc., but these frequently fail. The inhalation treatment has not proven as satisfactory as was at first hoped. The inhalation of steam is valuable to facilitate expectora-

tion. Careful nursing to avoid complications, and the judicious use of Papine will do much to lengthen the interval between fits of coughing even during the daytime, and thus husband the little patient's strength. — Medical News.

FEMALE NEUROSES.

Cerebro-nervous affections peculiar to women associated with pathological disturbances of the reproductive organs, are legion and most trying to physician and patient. Physicians are aware of the wide prevalence of these nervous disorders, for comparatively few women are entirely free from some phase of the ailment.

Neurasthenia, neuralgia and other manifestations either of an active or passive character, are common, and are always peculiarly rebellious in treatment. Neuralgia constitutes the great cause of danger from the employment of hypnotics and narcotics, which only afford relief by numbing, but effect no cure. On the other hand, the formation of a drug habit rather aggravates the condition from which relief was originally sought. I have found nothing so well suited to these cases as five-grain antikamnia tablets, administered in doses of from one to three tablets and repeated every one, two or three hours according to the attendant's judgment. These tablets not only afford complete relief without fostering a drug habit, but they do not endanger weakened hearts as is the case with so many other coal-tar derivatives. Being free from opium and allied products, their exhibition is attended with no unpleasant after-effects. I use them therefore in preference to any other preparation in the treatment of female neurotics, and experience demonstrates that they are safest and best. Prof. Chas. J. Vaughan, M.D.,

Chair Gynecology, Atlanta College Physicians and Surgeons.

For "Alabama Medical Journal."

PETROLEUM IN THE TREATMENT OF INFANTILE DIARRHOEA.

W. E. Fothergill, in conducting his clinical researches (according to the Medical Chronicle, Manchester, England, April, 1900) during the summer of 1899, administered Petroleum in thirty-four cases of Infantile Diarrhœa. The preparation was an emulsion containing 33 1-3 per cent. of Petroleum and the doses varied from ℥ss thrice daily to ℥i every four hours; the usual dose for a child a year old was ℥i of the emulsion (in 20 of Petroleum) thrice daily. In two cases salol was substituted at the end of a week. One child died. In the remaining cases recovery was rapid and complete. There was no derangement of the stomach, vomiting ceased almost before the diarrhœa was checked, and the stools soon regained their normal color and consistency. The emulsion seemed also

to favor recovery from the accompanying bronchial catarrh. It is said that the whole quantity of petroleum ingested may be recovered from the fæces. Clinical observation shows, however, that petroleum has an influence on mucous membranes other than those of the alimentary canal. Its action in cases of bronchial and vesical catarrh can be explained only by supposing that after absorption from the intestines petroleum is excreted by various organs. These experiments seem to prove that infantile diarrhœa can be treated successfully without the use of opium or astringents.

Angier's Petroleum Emulsion has been prescribed by the medical profession of the United States, as well as of England, for many years for just this class of troubles, and the foregoing results have often been verified in the hospitals of this country and by leading practitioners.

Angier's Petroleum Emulsion contains 33 1-3 per cent. of purified crude petroleum, 9 grains of the combined salts of lime and soda, with Glycerine and emulsifying agents, and was probably the emulsion used by Dr. Fothergill. It does not in any way disturb digestion or irritate the stomach, but on the contrary, benefits them in every way, and children always like to take it. The Emulsion may be prescribed to be taken in a little milk or water, which eliminates all taste of the medicine.

ANEMIA AND ITS RATIONAL TREATMENT.

By W. E. Holland, M.D., Chicago, Ills.

Consultant Mary Thompson Hospital; Assistant Gynecologist Illinois Medical College.

From the standpoint of our present knowledge, there is no contesting the fact that in all forms of anemia, iron, alone, or in combination with other recognized remedies, stands without a peer. The results accruing from its use, however, are in direct ratio to the assimilability of the preparation used.

The condition of the digestive organs during the administration of iron, and the consequent lack of power to utilize the remedy as ordinarily prepared, have presented a very discouraging prospect for the patient and disappointment to the physician, who finds that nearly all the chalybeate compounds can be tolerated but a short time—much shorter than is necessary for the accomplishment of the desired result, producing almost invariably loss of appetite, irritability of the stomach, obstinate constipation, headache, etc.

With an experience of some time in hospital, as well as private practice, during which I have been fortunately or unfortunately blessed with an unusual number of complicated and apparently uncomplicated cases

of anemia, I have had the inclination and quite ample opportunity to test the various ferruginous simples and compounds as to their relative merits, and of all used preparations those of the solution of pepto-manganate of iron, for their acceptability, unirritating properties and relative efficacy, held deservedly undisputed sway and preference, until the preparation "Hemaboloids" was brought to my notice. Skeptical and slow to depart from well-tried though not entirely satisfactory paths, I at last did experiment in a case that had resisted not only my efforts, but those of a number of recognized therapeutists, and obtained unusually satisfactory results.

No irritation of the stomach, no anorexia, no constipation, no headache, but, on the contrary, increase of appetite, regularity of the bowels, increase in bodily weight and red blood count.

The following is a record of the most obstinate case treated, which may be regarded as a fair specimen result obtained in upwards of twenty-five cases.

This case was of particular interest, since the patients presented an exceedingly unfavorable tubercular history, her mother being affected at the time, and two sisters having died of the malady. Treated with Hemaboloids ℥1-2 after meals and at bed time:

First week: weight, 157, Hem. 57 per cent.; R. B. C., 2,900,000; W. B. C., 8,500. Second week: weight, 158; Hem., 60 per cent.; R. B. C., 3,200,000; W. B. C., 8,000. Third week: weight, 160; Hem., 65 per cent.; R. B. C., 3,800,000; W. B. C., 8,000. Fourth week: weight, 163; Hem., 73 per cent.; R. B. C., 4,000,000; W. B. C., 7,000. Fifth week: weight, 162; Hem., 78 per cent.; R. B. C., 4,300,000; W. B. C., 6,500.

Various preparations have, from time to time, been lauded for their effect upon the blood and blood-making organs, and many of the old tried and new remedies have virtues of varying degree, and I have had a reasonable measure of success with all of them; but from the almost uniformly gratifying results from the use of the remedy just cited, it certainly has, in my hands and from my experience, been the remedy "par excellence" and well worthy of a trial in all those obstinate forms of blood impoverishment which resist other recognized treatment.

In closing, let me further remark that in the treatment of these cases the necessity and benefit of carefully selected, concentrated diet, regularity of feeding, fresh air, salt baths, and, last but not least, keeping the intestinal tract in an aseptic condition, must not be lost sight of.—The Medical Times.

MEDICAL MISSIONARIES IN CHINA.

Whatever may be the opinion of any individual as to the desirability of missionary enterprises in China and their bearing upon the present

terrible condition which prevails in that unfortunate country, there can be no question as to the value of the noble and unselfish work performed by the medical men and women, so many of whom are now, we fear, giving up their lives to their devotion to Christian evangelization. The first missionaries to do medical work were the Jesuit priests sent out by the Catholic Church. These worthy fathers often administered to the needs of the body while pointing out the necessities of the soul. Our materia medica has been enriched by several important drugs at their hands, including cinchona bark and ipecacuanha. In this branch of missionary work America has always taken a foremost part. * * * The Chinese have been generally quick to take advantage of and appreciative of the services of Western medical practitioners, even when other missionary workers have excited among them only hatred. As Dr. Maxwell says: "Again and again the lives of valued missionaries in China have escaped destruction at the hands of evil and fanatical mobs just because they were providentially recognized to be the friends and assistants of the missionary doctor."—Ex.

Five Kingsbury Pianos

Go to the A. C. F. College,

Tuskegee, Alabama.

Another Victory for America's Famous Piano!

After investigating various other makes of pianos, Dr. John Massey has given his order for five handsome Kingsbury Pianos, to be used in the A. C. F. College, which is one of the leading industrial institutions in the South.

IT WAS NO LEAP IN THE DARK, for the Kingsbury has been used in a number of Colleges near home for several years, and Dr. Massey knew its reputation. Among these are "The Cox Female College," College Park, Ga ; "Southern Female College," LaGrange, Ga.; "Tuscaloosa Female College," Tuscaloosa, Ala.; "Anniston Female College," Anniston, Ala.; "Southeastern Agricultural College," Abbeville, Ala.; "Agricultural College," Wetumpka, Ala.; "Gordon Institute," Barnesville, Ga.

I give them all as references as to the high quality of the world renowned Kingsbury. Write for prices.

E. E. FORBES, Sole Agent,

26 Dexter Avenue, MONTGOMERY, ALA.

Branch Houses at Birmingham, Anniston, Ala., and Rome, Ga.

AN INSTANCE OF MISDIRECTED PHILANTHROPY.

The Province medicale for September 15th quotes from the Gazette medicale de Paris an account of the strange doings of a benevolent woman who, having established a home for victims of infectious diseases, whenever she finds her institution depleted by death, makes a trip from Limoges, on the outskirts of which town it is situated, to Paris, where she takes from the general hospitals sufferers whom she thinks suitable for her hospitality, mostly persons in the last stages of consumption. She marshals them to Limoges, to their own detriment and, it appears, to the peril of the neighborhood. The mayor of Limoges has consequently forbidden the establishment or maintenance of such homes, and the Minister of the Interior is said to have approved of his course, but it is feared that the misguided philanthropist, Mlle. Noualhier, has influence enough with the Council of State to render it nugatory. Sanatoria are needed for the curable consumptives and those whose disease is reasonably susceptible of mitigation, but those who are in a dying condition may quite as well be left in the general hospitals.—N. Y. Med. Journal.

EVERY PHYSICIAN Has a certain class of patients who worry him a good deal, for while not being exactly ill or confined to their beds, they are always complaining of a feeling of depression, loss of energy, restlessness, insomnia, and a general feeling of "je ne sais quoi;" and while these symptoms may indicate a certain form of neurosis or nervous debility, he is at a loss as to what to prescribe, for while there are numerous remedies for nervous diseases he is often puzzled as to which to use. It is in this class of cases that **CELERINA**, a combination of Celery, Coca, Kola and Viburnum, is indicated, for while not acting as an unnatural stimulus, it soon restores the tired and jaded nervous system to its normal condition, and brings about a feeling of buoyancy and energy that will be pleasing and surprising to both physician and patient, and will induce him to confirm the verdict of his brethren all over the world as to the virtues of this preparation. It is put up in elegant and palatable form, and being made of the best material in large quantities, it is always uniform and certain in its results.

RIO CHEMICAL CO., St. Louis, Mo., U. S. A.

JEFFERSON COUNTY MEDICAL SOCIETY.

Commercial Club Rooms, Birmingham, Ala., Oct. 8, 1900.

The regular monthly meeting of the Jefferson County Medical Society was called to order by the President, Wyatt Heflin, M. D. The roll was called, and the minutes of the previous meeting were read and approved. The application of Dr. Wm. H. Williams for membership was read.

No Essayist was appointed for this meeting, and the Society listened to

REPORTS OF CASES.

Dr. Talley reported a case of syphilitic enlargement of the testicle. The patient contracted syphilis in 1897, and for a year took anti-syphilitic remedies, and all signs of the disease having disappeared, he quit taking medicine. After the lapse of a year, symptoms again manifested themselves, and in August, 1899, a painless enlargement of the testicle appeared, with a pustule on the scrotum. A few days ago he presented himself to Dr. Talley for treatment. On examination, the scrotum was found to have sloughed, leaving a complete hernia of the testicle, which was about three times as large as the other one. The Doctor stated that he had not been able to find recorded a case of hernia of a syphilitic testicle, and that the case was unique in this particular. The cord was not enlarged or indurated. The testicle was removed, and the patient was put upon anti-syphilitic treatment, and is improving.

DISCUSSION.

Dr. Ward said he had seen several cases of syphilitic testicle, some larger than this, but no case where sloughing had occurred or where there was hernia.

Dr. W. E. B. Davis reported the case of an elderly woman, who had for some years had a wandering tumor in the abdomen. On examination, he found the tumor impacted in the pelvis, but separate from the womb. It was with some difficulty pushed up out of the pelvis, and a diagnosis of enlarged spleen was made. She was put in the knee-chest position three or four times a day for several days, and an attack of severe pain came on, accompanied by tympany, constipation, temperature of 101 degrees and pulse about 100. The attack subsided in a few days. He thinks these symptoms were due to twisting of the pedicle.

Dr. Pressly reported a case of burn of the entire foot, which he treated by a continuous bath at temperature of 98 1-2 degrees F., for six days. When first seen, 1-2 grain morphine was administered for pain, but after the foot was put in the water, it did not pain any more, and the wound was kept perfectly aseptic. The water was not sterile, but contained boric acid. It was changed twice daily. After the sixth day the foot was dressed with carbolized vaseline.

DISCUSSION.

Dr. Lupton had seen several cases treated by the continuous bath with running water. He said it was not necessary to have sterile water, or to use antiseptics. He had seen a case which was contaminated by the bacillus ærogenes capsulatus recover with no symptoms of infection after being put in the continuous bath of running water.

Dr. Riggs saw in the hospital at Hamburg large tubs where patients were treated by continuous baths for 3 or 4 months at a time, the whole body being immersed. Sores, ulcers, cancers, etc., were receiving this treatment.

Dr. Abernathy reported three cases of acute constipation. The first patient was a young married woman, who had not had a stool for two weeks. She was weak and anemic, with temperature of 101-102. Rectal tube was used with no result. Upon a treatment of strychnine and Hunyadi water for three or four days, the bowels moved, and she improved. The second case was that of a girl of 16, who had suffered from impacted gall-stones, and had had no stool for ten days. A gill of olive oil was given every four hours, and a number of gall-stones were passed with complete relief. The third case was that of a large man who had been drinking for months, and who had not had a stool for three weeks. Rectal tube was used with no result. Morphine was given to quiet his nervousness, and salines were administered. In a few days his bowels moved.

Dr. Mason reported a case of vesicular mole in a patient who had been pregnant only about seven weeks, but whose uterus was enlarged until it almost reached the umbilicus. She had had repeated hemorrhages. Curettage removed a large mass of vesicles. A specimen was exhibited. She made a complete recovery.

Dr. Sellers reported a case of typhoid fever followed by abscess of the parotid gland. This was opened and drain. Eight weeks later a tumor with an expansile pulsation appeared below angle of the jaw. He diagnosed aneurism, and advised operation. Some other physician diagnosed sarcoma. The growth was rapid, and finally an operation was performed. The tumor proved to be an aneurism of the common and external carotids. The patient died in about thirty-six hours.

J. M. Mason, M. D., Secretary.

Abstracts.

RUBBER BALLOON IN OBSTETRICS.

The intra-uterine use of the rubber bag—metreurysis or hystereurysis, as it is called—is, in personal opinion, one of the most beneficial of recent achievements in practical obstetrics.

The technique is simple. If the canal will admit one finger, the external genitals are thoroughly disinfected, the portio vaginalis exposed by a Simon speculum, the anterior lip hooked down, the bag well disinfected by boiling, rolled upon itself, introduced into the uterus, and filled with sterile salt solution.

If the canal is not dilated, this is effected by tents, or a bougie is introduced and left until the necessary amount of dilatation has been secured. The bag is then introduced and left in position until expelled by the pains. If pains are not excited, the bag may be weighted.

The use of Simon's speculum is to be preferred. The specula of Trélat of Neugebauer, however, may be used, and, in case of necessity, the fingers alone answer very well.

With reference to the prognosis for the mother, there were no deaths in 45 cases noted. In 9 cases the puerperium was febrile for six days or less—i. e., 20 per cent.—a notable increase over the usual puerperal morbidity-rate in personal clinic—7.8 per cent.

The results for the children were less favorable: 8, or 17.7 per cent., were born dead; 8 died shortly after delivery, and 4 later, leaving only 25, or 55 per cent.

Of the rubber balloons, that of Müller, made by Stiefenhofer, of Munich, is to be recommended as the most durable, especially when permanent traction is required. For introducing the balloon, Chrobok's forceps is very useful. When the cervix is insufficiently dilated, a small Braun Colpeurynter may be used at first, to be followed later by the instrument of Müller.—W. Rubeska (Archiv. f. Gynäk., vol. lxi, No. 1; Obstetrics, Sept., 1900.)

ELECTRIC LIGHT AND THE EYE.

The action of electric flashes upon the eye is always classed as traumatic. Widmark has made some extended researches as to ocular trouble due to exposure to electric lights. From these he concludes that such are produced by a direct irritation of the parts affected, and that this irritation is produced almost exclusively by the ultraviolet rays, which, as is known, exert a similar influence upon the skin. Widmark has also found that such rays can also produce striated opacities of the

lens. If such, then, be the case, it is justifiable to conclude that domestic lights are injurious to the eyes in proportion to the amount of the ultraviolet rays they contain. According to personal observation, the Welsbach gas-light has proved more satisfactory and less injurious as a light by which we may read and work than any other. The light of the Welsbach light is produced by ignited gas passing through a thin, conical, veil-like body called a mantle. It is on the order of the calcium illuminator. This mantle, by being heated, radiates a steady, strong, white light. The chief point is, therefore, in the construction of these mantles. A recent writer says that the mantles are made by "saturating a fabric with a solution of rare mineral earths and then burning out the fabric, leaving a delicate, crystalline skeleton." The rare earths considered most effective are thorium and cerium, and they are contained in mineral mozarite, deposits of which, from having been almost worthless thirty years ago, have now attained great value. The writer adds that "attempts have been made recently to make mantles on another than the Welsbach principle of saturating a fabric and then burning it out, namely: by making the ingredients into a paste with some gummy substance, drawing it out into threads, and then weaving these into fabric, and burning it out as before." When the Welsbach is used for reading purposes there should always be an under shade, preferably white, so the intensity of the light may be mitigated.—Dunbar Roy (Med. News Sept. 8, 1900.)

ANTITOXIN.

Dr. L. J. Woollen (Southern Clinic): I have watched the result of its action upon the patients of other physicians before using it myself. The result of those observations led me to believe that in laryngeal cases the remedy is of considerable value. Since then I have used antitoxin, not in all cases, however, in diphtheria, and from the experience gained will state my conclusions: In the first place, it is not a specific for the disease. I have seen the membrane disappear after using the remedy, and in a day or two reappear in the same place. Were it truly a specific this should not be the case. I have never been able to say that it is of any value in the septic form of the disesae. In those cases where the nasi and naso-pharynx were involved, with resulting systemic infection it has seemed to me to be wholly useless. A good washing out of the nares with peroxide hydrogen, followed by dilute alcohol and tannin, was far more effective than an injection of antitoxin. But in cases where the larynx was involved, as shown by hoarseness and difficult breathing, I think I have seen excellent results follow its use. I have witnessed three different epidemics of diphtheria. The first was, I think in 1859; the second about 1870, and the third about seven or eight years ago. Since the beginning of the last epidemic we have had sporadic cases

every winter. Before the advent of antitoxin I had seen but three cases of laryngeal diphtheria recover. In these cases the membrane was thrown off in the form of a cast of the whole or part of the trachea and larynx. So rare was recovery in such cases that we always gave an unfavorable prognosis when the symptoms denoted a formation of false membrane in the larynx. At this time the case is quite different, for by the timely use of antitoxin in proper doses, in conjunction with other treatment, we have hope of recovery. Of course not all cases of diphtheritic croup will recover under such treatment for many will die in spite of antitoxin, intubation, or other measures. Certainly, however, the death rate can be reduced.

DIETETIC TREATMENT OF BRIGHT'S DISEASE.

In dietetic treatment of Bright's disease, as a general rule, dark meats such as wild fowls and extracts of meat such as Liebig's, should be avoided The chief danger in such foods is the toxic properties of the ptomaines they contain. In the periods when the disease is not active, white meats can be used, all condiments to be avoided. Some patients bear fish badly, but shellfish can be used in moderation. Some patients bear milk and vegetable diet badly, and in such meats can be cautiously used, the urine being frequently examined to see that the albumin does not increase. Eggs are a disputed article; sometimes they agree well and sometimes badly. When, however, the digestive tract is in good condition they are usually well borne; it acts as a diuretic, diminishes the albumin and increases the urea. Three and a half to four liters a day may be used. Certain patients cannot use an absolute milk diet, however, and in them a mixed diet is useful. A grape diet, skimmed milk or koumyss may be used to advantage. Most authors allow beer and a slight amount of light wines. In acute Bright's disease physical effort often increases the albuminuria. In this condition, and in the acute exacerbations of chronic nephritis, the patient should be in bed. In the chronic condition slight exercises are admissible, but where there is much polyuria or hypertrophy of the heart, it is not to be permitted.

Patients should avoid being chilled, and in winter should remain in a temperature as near as possible 75 to 80 degrees, and should wear flannel underclothing. The functions of the skin should be carefully looked after; baths, tepid and hot, followed by friction and massage, are recommended by most authors, though Lecuche and Talamon recommend the cold baths.—N. Y. Med. Times.

TREATMENT OF ECLAMPSIA.

A number of papers were read on this subject at the recent International Congress at Paris, Section on Obstetrics.

Mangaigalli, of Pavia, has used veratrum viride for the past four

years for the actual convulsive seizures of eclampsia; the obstetrical treatment, which fills the causal indication to some extent, does not control the element in question. The speaker found the results from veratrum almost constant. In eighteen cases so treated, seventen recovered, and in every case the convulsions ceased. The patient who died lived nine days after cessation of convulsions. The preparation of veratrum used is the fluid extract.

Stroganoff, of St. Petersburg, in a paper on treatment of eclampsia, stated that after the first convulsion he begins to use narcotics as a prophylactic, continuing their exhibition for from twelve to forty-eight hours, according to the severity of the case. He regards eclampsia as an acute infectious disease, the average duration of which is but forty-eight hours. He gets the best results from a combination of morphine and chloral. Great pains must be taken with the respiratory function (position, oxygen, dry cups) and heart (salt solution, digitalis). The patient is removed from all irritating surroundings, and accouchement force is indicated when no serious danger impends for mother or fetus.

Stroganoff has carried out this treatment vigorously, and out of ninety-two cases has had but five deaths, two of which were from accidental causes, while the others were badly off as to general condition when first admitted. The treatment was seen to notably diminish the number of accesses, while a favorable influence was also exerted upon the condition of both mother and fetus.

Porak also read a paper on the treatment of eclampsia. From 1882 to 1891 he treated fifty eclamptics, with fourteen deaths. His management consisted of bloodletting, chloroformization and chloral. He concludes the bloodletting was not sufficient, but that it was illogical to employ poisonous substances for eclampsia, itself probably an intoxication.

From 1891 to 1898 he treated forty-one cases of eclampsia, with twelve deaths, depending upon the salt solution hypodermically (seven per cent.), with a view of provoking diuresis. This latter manifestation, while often present, is not constant. If the renal function has been suspended, the salt solution may even do harm. From March, 1898, to July, 1900, he treated forty-seven eclamptics, with only three deaths. Starting with the theory that the eclamptic convulsion is a symptom of auto-intoxication which often has for exciting cause some peripheral irritation, he changed his management to the following: 1. Lavage of intestine, up to forty litres, until the emission of bile. 2. Lavage of the blood, viz., bleeding, up to 750 gms., followed by injection of 1500 gms. salt solution. Diuresis is thereby obtained. 3. Avoid eclamptic reflexes, and especially the stomach reflex, by allowing nothing to be swallowed during the disease, and finally accouchement forcé.

La Torre, discussing these papers, said that eclampsia was a complex condition, in which treatment must vary with the case. As a rule, he

employed bloodletting, lavage of intestines, and diaphoresis. As a sedative for the convulsions he used morphine.

Cregorias, of Tiflis, believes in the renal origin of eclampsia. He gives no drugs, but strives to sustain the forces of the patient.

OBSTRUCTION OF THE BOWEL FROM FECAL IMPACTION.

The Bulletin of The Cleveland General Hospital for January contains a report of two cases of "Obstruction of the Bowel from Fecal Impaction," reported by Norman C. Yareau, M. D.

Case 1. Mrs. H., age 30; Canadian; mother of two children, not robust but tall and frail.

Attack began July 31, 1899, with vomiting, pain in abdomen, back and limbs. There was tenderness over McBurney's point and a small mass noticeable. Temperature remained normal during attack, and the pulse was only slightly accelerated and never weak. There was no toxemia, although the obstruction lasted one week. The abdomen was at no time distended, vomiting did not continue after the onset and after the obstruction was relieved she was able to be out of the hospital in three days. Dr. F. E. Brunts saw the case with me.

Treatment consisted in repeated doses of one-fourth grains of calomel, followed by enemata of salts and glycerine as soon as stools appeared. She was given cascara. Her appetite remained fair during the attack, but her diet consisted of one-half glass of milk once in three hours. The obstruction was likely in the ascending colon.

Case 2. Mr. P., age about 38; lake captain; robust and hearty; weight about 200 pounds.

On September 19, 1899, was taken with pain in the abdomen, vomiting and constipation. Bowels moved slightly the following day. Obstruction then continued for four days, despite active cathartics, such as several drops of croton oil, which had been given him by a Toledo physician. He first came under my care four days after the onset. He suffered intensely from frontal headache, his eyes were very sensitive to light, almost complete suppression of urine, and great thirst. Abdomen distended to left side, where it was not so noticeable, and where tenderness was not so pronounced.

There was considerable desire but inability to defecate. Tongue heavily coated and breath very offensive. Obstruction lasted five days.

Treatment.—Calomel, 1-4 grain every half hour for several doses followed by Epsom salts, one drachm every hour and enemata of salts and glycerine.

The first enema came away clear. The rectal tube was passed and a colon flush of salts and glycerine given with syringe elevated six feet. This was followed by a free movement of very offensive mucus and some fecal matter. Patient felt some better.

Pot. cit. 10 grs., spts, aeth, nit. gtts. and given every two hours to increase activity of the kidneys.

Treatment continued and two days later a high enema of cotton seed oil was followed by hard fecal masses.

Relief from his symptoms now rapidly followed. His diet during stage of complete obstruction consisted of beef tea.

The absence of vomiting in both cases after the first onset is noteworthy and gave reason for a more favorable prognosis.

THE TREATMENT OF RINGWORM ON THE SCALP.

Jamieson writes in the Edinburgh Medical Journal for June, 1900, on this subject. He believes that in treatment the following are the rules to be observed: (1) The hair must not only be cut or shaved off, but the entire scalp must be kept bare of hair, by razor or curved surgical scissors, till the cure is complete. In this there can be no compromise. Those in care of the child are apt to evade this injunction, on the ground that to them the disease seemed cured; but the doctor, aided by the microscope, ought alone to be the judge as to when the hair may be allowed to grow. (2) Again, the scalp must be kept rigorously clean. It must be washed twice daily with a fluid superfatted potash soap and warm water, the soap being poured on a piece of wet flannel and moderate friction employed. Such a soap only will keep the surface soft, polished, and adapted for the reception of remedies. The affected areas usually show a pinkish tint, as compared with the healthy, while the diseased hairs do not all grow in the proper direction. The application which has proven most efficacious in his hands is one modified from an old formula of the late Sir William Jenner. It consists of precipitated sulphur, 1 drachm; salicylic acid, beta-naphthol, and ammoniated mercury, each 10 grains; and lanolin, 1 ounce. For lanolin we may perhaps substitute vasogen, an oxidized vaselin, which is credited with enhanced absorptive powers; but his experience of it is yet too small to enable him to speak with confidence. One point of great consequence is that the ointment be rubbed in for ten minutes slowly and carefully twice a day. In this way the epidermis becomes charged with the antiseptics, the sulphur, mercury and naphthol; while the salicylic acid favors the moulting of the diseased hair while increasing the porosity of the skin. In compounding we may replace the naphthol by thymol, or we may use in exchange a salve of oleate of copper in the proportion of 25 to 50 grains to the ounce. Whatever we use, the principle is the same—the steady saturation of the permeable epidermis with substances hostile to the fungus. In this way, and in this way only, in the present state of our knowledge, by patient insistence, we can cure the most refractory instances of ringworm of the scalp.—The Therapeutic Gazette.

SURGICAL TECHNIC FOR NURSES. By Emily A. M. Stoney, late Superintendent of the Training-school for Nurses, Carney Hospital, South Boston. 12mo volume of about 200 pages, fully illustrated. Price, $1.25 net. W. B. Saunders & Co., Publishers.

One of the most practical, up-to-date little books on the subject of surgical technic for nurses is the one before us. The elaborate illustrations, with half-tone photographs of large operating rooms add much to the attractiveness of the book. We are sure that we take no risk in commending this book to every one who is interested in the subject treated.

DISEASES OF WOMEN. By Henry J. Garrigues, A.M., M.D., Professor of Gynecology in the New York School of Clinical Medicine; Gynecologist to St. Mark's Hospital and to the German Dispensary, New York City, etc. Handsome octavo; 756 pp. Illustrated by 367 engravings and colored plates. Cloth, $4.50 net; sheep or half morocco, $5.50 net. W. B. Saunders & Co.

The third edition of the above book is on our desk. The author has spent much time in carefully revising and bringing the work up fully to date. Every physician who is interested in gynecology should have this last edition in his library. Many of the medical colleges are using it as a text book. This is a high recommendation for the work. A long list of critics in their reviews on the book speak in the highest terms of it.

A MANUAL OF PERSONAL HYGIENE, edited by Walter L. Pyle, A.M., M.D., Assistant Surgeon to Will's Hospital, Philadelphia; Fellow of the American Academy of Medicine; former editor of the International Magazine, etc.; 12mo.; pp. 344; illustrated. Price, $1.50. W. B. Saunders & Co., publishers, Philadelphia: 1900.

A more interesting study cannot be engaged in than that which treats of the best modes of preserving the health. This book contains many valuable suggestions as to eating, breathing, drinking, bathing, sleeping and exercising, and gives a complete, well-defined exposition on correct living in accordance with the best physical laws. There are many important points brought out, but none more instructive than the chapter on how to develop and retain the mental and physical vigor.

THE STUDENT'S MEDICAL DICTIONARY, Including all the Words and Phrases Generally used in Medicine, with Their Proper Pronunciation and Definitions. Based on Recent Medical Literature. By George M. Gould, A. M., M. D., Author of an "Illustrated Dictionary of Medicine, Biology and Allied Sciences," "Thirty Thousand Medical Words Pronounced and Defined," etc., with Elaborate Tables of the Bacilli, Micrococci, Leucomaines, Ptomaines, etc., of the Arteries, Ganglia, Muscles and Nerves; of Weights and Measures, Analysis of the Waters of the Mineral Springs of the United States, etc., and a New Table of Eponymic Terms and Tests. Eleventh Edition, Enlarged, with many Illustrations. Philadelphia: P. Blakiston's Son & Co., Publishers. Price, Half Morocco, $2.50; with Thumb Index, $3.00.

A demand for the eleventh edition of this work shows conclusively that it is fully appreciated by the profession. The book is more especially adapted to the needs of medical students, and with them it is in great demand. The correct, brief definition of all the more common words which are to be found in text books, lectures, compendiums, tables, etc., gives it more value as a student's medical dictionary. Dr. Gould, in his arrangement of this work, has taken special pains in making this volume not only complete and easily comprehensive, but very practical.

DIET LISTS AND SICK-ROOM DIETARY. By Jerome B. Thomas, M.D., Visiting Physician to the Home for Friendless Women and Children, and to the Newsboys' Home. Cloth, $1.25 net. W. B. Saunders & Co., Publishers.

The fact that the second edition has been issued, shows that the profession appreciates this little book. It contains so many valuable suggestions on how to prepare food for the sick, with a detachable diet list, and many other conveniences, at once impress the practitioner of medicine with its value. It is bound to have a large sale.

A MANUAL OF THE DISEASES OF THE EYE. By Charles H. May, M.D., Chief of Clinic and Instructor in Ophthalmology, Eye Department College of Physicians and Surgeons, Medical Department Columbia University, New York.

This pocket manual contains about 400 pages divided into 27 chapters, written and designed for students and general practitioners of medicine. It contains nothing new to the experienced ophthalmologist, but would be a valuable help to the beginner, being concise, practical and systematic, and contains the fundamental facts and essentials in the text. The illustrations are for the most part original, and are exceptionally good for a work of its kind.

G. H. S.

Table of Contents.

ORIGINAL COMMUNICATIONS.

PAGE

Annual Address of the President. By J. C. LeGrand, M.D., Birmingham, Ala. 277
Appendicitis. By Samuel Lloyd. M.D. 288
A Plea for Early Operations in Inguinal Hernia. By W. F. Westmoreland, M.D., Atlanta, Ga. 301
Some Observations on the Value of Vaccination as a Preventive of Smallpox, By H. Green, M.D., Bolling, Ala. 307
Scarlet Fever in Birmingham. By M. N. Due, M.D., Birmingham, Ala 309
CORRESPONDENCE 311

DEPARTMENTS.

Genito-Urinary and Rectal Surgery 313
Gynecology and Abdominal Surgery 319

SOCIETY REPORTS.

New York Academy of Medicine 322

SELECTED ARTICLES.

Muscular Rheumatism: Its Etiology and Diagnostic Relationship with Appendicitis. By E. C. Underwood, M.D., Louisville, Ky. 327

EDITORIAL DEPARTMENT.

Change in Name Only 331
The Medical Association of the State of Alabama 332
EDITORIAL AND MISCELLANEOUS NOTES 335–338

Index to Advertisers.

	PAGE		PAGE
Chas H Phillips Chem. Co	1st Cover	Scott & Bowne	19
Armour Laboratory	1st Cover	Kress & Owen Co	19
Chas Roome Parmele Co	1st Cover	The Purdue Frederick Co	20
Henry K. Wampole & Co.	1	Farbenfabriken of Elberfeld Co	20
Battle & Co.	1	Chas Marchand	21
Peacock Chemical Co	2	New York Polyclinic and Hospital	21
Sultan Drug Co	2	The New York Pharmacal Associa'n	22
Ben. M. Jacobs & Bros	2d Index Card	Battle Creek Sanitorium	22
Micajah & Co	3	E. E. Forbes	
Henry Pharmacal Co	3	Lambert Pharmacal Co	23
Mellier Drug Co	4	Amzi Godden Co	24
University of the South	4	The Argol Chemical Company	25
Edgar A. Jones, M.D.	4	Chattanooga Medical College	26
New York Pharmaceutical Co	5	R. D. Burnett & Co	26
Sharp & Dohme	6	O. D. Chemical Co	26
Robinson-Pettet Co	6	Globe Manufacturing Co	27
H. A. Cassebeer	7	Rios Chemical Co	28
Mariani & Co	7	Geo. H. Noble, M. D	29
John B. Daniel	8	Wheeler's Tissue Phosphates	29
Antikamnia Chem Co	9	L. & N. R. R.	29
Drs. Elkin & Cooper	9	Adams Drug Co	30
Pheno-Bromate Chem. Co	10	Dr. J. B. S. Holmes	30
G. W. Flavell & Bro	10	California Fig Syrup Co	30
Canton Surg. & Dental Chair Co	11	Satyria Pharmacal Co.	31
Drs. Davis & Davis' Private Infirmary	11	Highland Park Sanatorium	31
Drs. Talley & Chapman	12	The Oakland Chemical Co	32
Beechhurst Sanitarium	12	The Viskolein Co	33
The Bovinine Co	13	The Atlanta Retreat	33
Birmingham Medical College	14	The Chas. N. Crittenton Co	34
M. J. Brietenback Company	15	Fellows' Hypophosphites	3d Cover
Parke, Davis & Co	16	Fairchild Bros. & Foster	4th Cover
Mellen's Food Co	17		
E. J. Hart & Co	18		

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Table of Contents.

Original Communications.

PAGE

Venereal Hygiene of the Future. By E. H. Sholl, M. D. Discussion by Dr. R. C. Bankston, George Huddleston, Esq., and Dr. S. L. Ledbetter, Birmingham, Ala. ... 339

Inversion of the Uterus, with Report of a Case. By J. M. Mason, M. D., Birmingham, Ala. ... 347

Chronic Interstitial Nephritis. By Edgar Allen Jones, A.B., M.D., Birmingham, Ala ... 357

Malarial Phenomena Without the Agency of Mosquitoes. By H. A. Moody, M.D., Tuscaloosa, Ala ... 359

Society Reports.

New York Academy of Medicine ... 363

Selected Articles.

Why I Use Pepto-Mangum "Gude." By Wm. Krauss, M.D., Memphis, Tenn... 369

"A Remedy of Special Therapeutic Properties." By Chas. H. Powell, M.D., St. Louis ... 371

Irregular Menstruation in Young Women Due to Anæmic Conditions. By E. H. Lewis, M.D., Burlington, Vt ... 373

Editorial.

Prominent Alabamians ... 377

American Medical Association ... 378

Examining Boards ... 378

Miscellaneous Notes ... 381–386

Book Notices ... 387–388

Abstracts ... 389–400

Index to Advertisers.

PAGE

Chas H Phillips Chem. Co.....1st Cover

Armour Laboratory.....1st Cover

Chas Roome Parmele Co.....1st Cover

Henry K. Wampole & Co. 1

Battle & Co 1

Peacock Chemical Co 2

Sultan Drug Co 2

Ben. M. Jacobs & Bros ...2d Index Card

Micajah & Co 3

Henry Pharmacal Co 3

Mellier Drug Co .....

Edgar A. Jones, M.D., ... 4

Nabers, Morrow & Sinnige 4

New York Pharmaceutical Co 5

Sharp & Dohme 6

Robinson-Pettet Co 6

H. A. Cassebeer 7

Mariani & Co 7

John B. Daniel 8

Antikamnia Chem Co 9

Drs. Elkin & Cooper 9

Pheno-Bromate Chem. Co.....10

G. W. Flavell & Bro.....10

Canton Surg. & Dental Chair Co.....11

Drs. Davis & Davis' Private Infirmary.11

Drs. Talley & Chapman.....12

Beechhurst Sanitarium.....12

The Bovinine Co.....13

Birmingham Medical College.....14

M. J. Brietenback Company.....15

Parke, Davis & Co.....16

Mellen's Food Co.....17

E. J. Hart & Co.....18

PAGE

Scott & Bowne.....19

Kress & Owen Co.....19

The Purdue Frederick Co.....20

Farbenfabriken of Elberfeld Co.....20

Chas Marchand.....21

New York Polyclinic and Hospital.....21

The New York Pharmacal Associa'n..22

Battle Creek Sanitorium.....22

E. E. Forbes .....

Lambert Pharmacal Co.....23

Amzi Godden Co 24

The Vass Chemical Company 25

Chattanooga Medical College.....26

R. D. Burnett & Co.....26

O. D. Chemical Co.....26

Globe Manufacturing Co.....27

Rios Chemical Co.....28

Geo. H. Noble, M. D.....29

Wheeler's Tissue Phosphates.....29

L. & N. R. R.....29

Adams Drug Co.....30

Dr. J. B. S. Holmes.....30

California Fig Syrup Co.....30

Satyria Pharmacal Co. 31

Highland Park Sanatorium.....31

The Oakland Chemical Co.....32

University of Nashville Med. Dept.....33

The Atlanta Retreat.....33

The Chas. N. Crittenton Co.....34

H. K. Mulford Co.....2d Cover

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Table of Contents.

ORIGINAL COMMUNICATIONS.

PAGE

The Diagnostic Value of Eudoscopy and Cystoscopy. By James E. Dedman, A.B., M.D., Birmingham... 401
Prevention. By R. C. Bankston, M.D. Discussion by Dr. Parke and Dr. Wetherbee, Birmingham... 413
History of an Outbreak of Smallpox at Alabama City. By Erastmus T. Camp, M.D., Gadsden, Ala... 422
Notes on Some of the Newer Remedies. By H. A. Moody, M.D., Tuscaloosa, Ala... 429

CORRESPONDENCE.

Vienna, Austria, Letter. By J. D. Gibson, M.D... 432

SELECTED ARTICLES.

The Treatment of Hypochondriasis as a Symptom of Malnutrition. By W. H. Vail, M.D., St. Louis, Mo... 435

EDITORIAL.

The Specialist... 439
Personal Life... 440
A Medical Cabinet Officer... 441
County Presidents... 442

MISCELLANEOUS NOTES... 443-446
BOOK NOTICES... 447-450
ABSTRACTS... 451-458

Index to Advertisers.

PAGE

Chas H Phillips Chem. Co.....1st Cover
Armour Laboratory.....1st Cover
Chas Roome Parmele Co.....1st Cover
Henry K. Wampole & Co. 1
Battle & Co..... 1
Peacock Chemical Co..... 2
Sultan Drug Co..... 2
Ben. M. Jacobs & Bros ...2d Index Card
Micajah & Co..... 3
Henry Pharmacal Co..... 3
Mellier Drug Co..... 4
Edgar A. Jones, M.D.,..... 4
Nabers, Morrow & Sinnige..... 4
New York Pharmaceutical Co..... 5
Sharp & Dohme 6
Robinson-Pettet Co..... 6
H. A. Cassebeer,..... 7
Mariani & Co..... 7
John B. Daniel..... 8
Antikamnia Chem Co 9
Drs. Elkin & Cooper..... 9
Pheno-Bromate Chem. Co.....10
G. W. Flavell & Bro.....10
Canton Surg. & Dental Chair Co.....11
Drs. Davis & Davis' Private Infirmary.11
Drs. Talley & Chapman.....12
Beechhurst Sanitarium.....12
The Bovinine Co.....13
Birmingham Medical College.....14
M. J. Brietenback Company.....15
Parke, Davis & Co.....16
Mellen's Food Co.....17
E. J. Hart & Co.....18
Chas Marchand.....19
New York Polyclinic and Hospital.....19

PAGE

The New York Pharmacal Associa'n..20
Battle Creek Sanitorium.....20
Scott & Bowne.....21
Kress & Owen Co.....21
The Purdue Frederick Co.....22
Farbenfabriken of Elberfeld Co.....22
E. E. Forbes .....
Lambert Pharmacal Co.....23
Amzi Godden Co 24
The Vass Chemical Company 25
Chattanooga Medical College.....26
College of Phys. & Surg. Baltimore....26
O. D. Chemical Co.....26
Globe Manufacturing Co.....27
Rios Chemical Co.....28
Geo. H. Noble, M. D.....29
Wheeler's Tissue Phosphates.....29
L. & N. R. R.....29
Adams Drug Co.....30
Dr. J. B. S. Holmes.....30
California Fig Syrup Co.....30
Satyria Pharmacal Co. 31
Highland Park Sanatorium.....31
The Oakland Chemical Co.....32
J. R. Goodloe.....33
Vanderbilt University.....34
Tulane University of Louisiana.....35
Medical College of Alabama.....36
University of Maryland.....36
University of Nashville Med. Dept.....37
The Atlanta Retreat.....37
The Chas. N. Crittenton Co.....38
H. K. Mulford Co.....2d Cover
Fellows' Hypophosphites.....3d Cover
Fairchild Bros. & Foster.....4th Cover

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Table of Contents.

Original Communications.

PAGE

Address of Chairman of Section of Obstetrics and Diseases of Women of the American Medical Association. By W. E. B. Davis, M.D., Birmingham, Ala. 459
Opiates and Ethics. By Barton W. Stone, M.D., Louisville, Ky. 465
Nosophen and Antinosine in the Treatment of Diseases of the Nose, Throat and Ear. By Edwin Pynchon, M.D., Chicago, Ill. 470
A Point of View in Therapeutics. By Thos. D. Parke, M.D., Birmingham, Ala. 476
The Pothogenesis of Malaria and Some Remarks on its Manifestation. By R. C. Bankston, M.D., Birmingham, Ala. 481

Selected Articles.

Appendicitis From a Medical Standpoint. By I. N. Love, M.D., St. Louis. 485

Editorial.

Courtesy. 495
The Carping Critic. 496
It Must be Erected. 497

Miscellaneous Notes. 499–504
Book Notices. 505
Abstracts. 507–516

Index to Advertisers.

PAGE

Chas H Phillips Chem. Co. 1st Cover
Armour Laboratory. 1st Cover
Chas Roome Parmele Co. 1st Cover
Henry K. Wampole & Co. 1
Battle & Co. 1
Peacock Chemical Co. 2
Sultan Drug Co. 2
Ben. M. Jacobs & Bros 2d Index Card
Micajah & Co. 3
Henry Pharmacal Co. 3
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Edgar A. Jones, M.D. 4
Nabers, Morrow & Sinnige. 4
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Sharp & Dohme 6
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H. A. Cassebeer 7
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John B. Daniel 8
Antikamnia Chem Co 9
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Pheno-Bromate Chem. Co. 10
G. W. Flavell & Bro. 10
Canton Surg. & Dental Chair Co. 11
Drs. Davis & Davis' Private Infirmary. 11
Drs. Talley & Chapman. 12
Beechhurst Sanitarium 12
The Bovinine Co. 13
Birmingham Medical College. 14
M. J. Brietenback Company. 15
Parke, Davis & Co. 16
Mellen's Food Co. 17
E. J. Hart & Co. 18
Chas Marchand. 19
New York Polyclinic and Hospital. 19

PAGE

The New York Pharmacal Associa'n. 20
Battle Creek Sanitorium. 20
Scott & Bowne. 21
Kress & Owen Co. 21
The Purdue Frederick Co. 22
Farbenfabriken of Elberfeld Co. 22
E. E. Forbes
Lambert Pharmacal Co. 23
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The Vass Chemical Company 25
Chattanooga Medical College. 26
College of Phys. & Surg. Baltimore. 26
O. D. Chemical Co. 26
Globe Manufacturing Co. 27
Rios Chemical Co. 28
Geo. H. Noble, M. D. 29
Wheeler's Tissue Phosphates. 29
L. & N. R. R. 29
Adams Drug Co. 30
Dr. J. B. S. Holmes. 30
California Fig Syrup Co. 30
Satyria Pharmacal Co. 31
Highland Park Sanatorium. 31
The Oakland Chemical Co. 32
Vanderbilt University. 34
Tulane University of Louisiana. 35
Medical College of Alabama. 36
University of Maryland. 36
University of Nashville Med. Dept. 37
The Atlanta Retreat. 37
The Chas. N. Crittenton Co. 38
H. K. Mulford Co. 2d Cover
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Table of Contents.

Original Communications.

PAGE

The Need of a Separate Prison for Consumptive Convicts. By W. H. Blake, M.D., Wetumpka, Ala. ... 517
Difficult Labors and Their Management. By Thomas Edmund Dryer, M.D., Huntsville, Ala. ... 522
Pneumonia. By Richard Matthew Fletcher, M.D , Huntsville, Ala. ... 525
The Effect of flashes of Electric Light Upon the Eye. By Dunbar Roy, A.B., M.D., Atlanta, Ga. ... 532
Notes on Some Remedies of Recent Introduction. By H. A. Moody, M.D., Tuskaloosa, Ala. ... 539

Selected Articles.

Human Temperature in Disease. By Norman Bridge, M.D., Los Angeles, Cal. 541
The Diseases of the Blood in Their Relation to Surgery and Their Treatment. By Geo. G. Van Schaick, M. D. ... 548

Editorial.

Trouble in Texas ... 559
The Jefferson County Medical Society Passes on an Ethical Question ... 560
Meeting of the Tri-State Medical Society ... 562

Miscellaneous Notes ... 565–572
Book Notices ... 573–574
Abstracts ... 575–576

Index to Advertisers.

PAGE

Chas H Phillips Chem. Co. ... 1st Cover
Armour Laboratory ... 1st Cover
Chas Roome Parmele Co. ... 1st Cover
H. K. Mulford Co. ... 2d Cover
Henry K. Wampole & Co. ... 1
Battle & Co. ... 1
Peacock Chemical Co. ... 2
Sultan Drug Co. ... 2
Ben. M. Jacobs & Bros ... 2d Index Card
Micajah & Co. ... 3
Henry Pharmacal Co. ... 3
Mellier Drug Co. ... 4
Edgar A. Jones, M.D. ... 4
Nabers, Morrow & Sinnige ... 4
New York Pharmaceutical Co. ... 5
Sharp & Dohme ... 6
Robinson-Pettet Co. ... 6
H. A. Cassebeer ... 7
Mariani & Co. ... 7
John B. Daniel ... 8
Antikamnia Chem Co ... 9
Drs. Elkin & Cooper ... 9
Pheno-Bromate Chem. Co. ... 10
G. W. Flavell & Bro. ... 10
Canton Surg. & Dental Chair Co. ... 11
Drs. Davis & Davis' Private Infirmary. 11
Drs. Talley & Chapman ... 12
Beechhurst Sanitarium ... 12
The Bovinine Co. ... 13
Birmingham Medical College ... 14
M. J. Brietenback Company ... 15
Parke, Davis & Co. ... 16
Mellen's Food Co. ... 17
E. J. Hart & Co. ... 18

PAGE

Chas Marchand ... 19
New York Polyclinic and Hospital ... 19
The New York Pharmacal Associa'n ... 20
Battle Creek Sanitorium ... 20
Scott & Bowne ... 21
Kress & Owen Co. ... 21
Angier Chemical Co. ... 22
Lambert Pharmacal Co. ... 23
The Purdue Frederick Co. ... 24
Farbenfabriken of Elberfeld Co. ... 24
The Vass Chemical Company ... 25
Chattanooga Medical College ... 26
College of Phys. & Surg. Baltimore ... 26
O. D. Chemical Co. ... 26
Globe Manufacturing Co. ... 27
Geo. H. Noble, M. D. ... 28
Wheeler's Tissue Phosphates ... 28
L. & N. R. R. ... 28
Adams Drug Co. ... 29
Dr. J. B. S. Holmes ... 29
California Fig Syrup Co. ... 29
Satyria Pharmacal Co. ... 30
Highland Park Sanatorium ... 30
The Oakland Chemical Co. ... 31
Vanderbilt University ... 32
Tulane University of Louisiana ... 33
Medical College of Alabama ... 34
University of Maryland ... 34
University of Nashville Med. Dept ... 35
The Atlanta Retreat ... 35
The Chas. N. Crittenton Co. ... 36
Fellows' Hypophosphites ... 3d Cover
Fairchild Bros. & Foster ... 4th Cover

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Table of Contents.

Original Communications.

PAGE

Cholera Infantum and Summer Diarrhœa of Children. By P. H. Brothers, M.D., Zula, Ala. 577
Treatment of Burns. With Report of Cases. By H. N. Rosser, M.D., Birmingham, Ala. 579
Burns. By Dr. Ira J. Sellers. 584
Acute Entero-Colitis of Infants. By Wm. Wade Harper, M.D., Selma, Ala. 590

Selected Articles.

A Passing Notice of the Therapeutic Application of Psychology. By Willis B. Parks, M.D., Atlanta, Ga. 597
The Use of Hydrozone and Glycozone in Gastric and Intestinal Disturbances. By W. H. Vail, M.D. 599

Editorial.

Birmingham and the Doctors 603
Dr. Hunter McGuire 604
The Pan-American Medical Congress 606
Carbolic Acid 609
Reasonable Compensation 609
Negroes Partially Immune 609

Miscellaneous Notes 611–626
Book Notices 627–628
Abstracts 629–636

Index to Advertisers.

PAGE

Chas H Phillips Chem. Co. ..... 1st Cover
Armour Laboratory ..... 1st Cover
Chas Roome Parmele Co. ..... 1st Cover
H. K. Mulford Co. ..... 2d Cover
Henry K. Wampole & Co. 1
Battle & Co. 1
Peacock Chemical Co. 2
Sultan Drug Co. 2
Ben. M. Jacobs & Bros ..... 2d Index Card
Micajah & Co. 3
Henry Pharmacal Co. 3
Mellier Drug Co. 4
Nabers, Morrow & Sinnige 4
New York Pharmaceutical Co. 5
Sharp & Dohme 6
Robinson-Pettet Co. 6
H. A. Cassebeer 7
Mariani & Co. 7
John B. Daniel 8
Antikamnia Chem Co 9
Drs. Elkin & Cooper 9
Pheno-Bromate Chem. Co. 10
G. W. Flavell & Bro. 10
Canton Surg. & Dental Chair Co. 11
Drs. Davis & Davis' Private Infirmary. 11
Drs. Talley & Chapman 12
Beechhurst Sanitarium 12
The Bovinine Co. 13
Birmingham Medical College 14
M. J. Brietenback Company 15
Parke, Davis & Co. 16
Mellen's Food Co. 17
E. J. Hart & Co. 18

PAGE

Chas Marchand 19
New York Polyclinic and Hospital 19
The New York Pharmacal Associa'n 20
Battle Creek Sanitorium 20
Scott & Bowne 21
Kress & Owen Co. 21
Angier Chemical Co. 22
Lambert Pharmacal Co. 23
The Purdue Frederick Co. 24
Farbenfabriken of Elberfeld Co. 24
The Vass Chemical Company 25
The Gibson Sanitarium 26
College of Phys. & Surg. Baltimore. 26
O. D. Chemical Co. 26
Globe Manufacturing Co. 27
Geo. H. Noble, M. D. 28
Wheeler's Tissue Phosphates 28
L. & N. R. R. 28
Adams Drug Co. 29
Dr. J. B. S. Holmes 29
California Fig Syrup Co. 29
Satyria Pharmacal Co. 30
Highland Park Sanatorium 30
The Oakland Chemical Co. 31
Martin H. Smith Co. 32
Tulane University of Louisiana 33
Medical College of Alabama 34
University of Maryland 34
The Viskolein Company 35
The Atlanta Retreat 35
The Chas. N. Crittenton Co. 36
Fellows' Hypophosphites ..... 3d Cover
Fairchild Bros. & Foster ..... 4th Cover

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Table of Contents.

ORIGINAL COMMUNICATIONS.

PAGE

Puerperal Infection: Its Causes and Prevention. By Seale Harris, M.D., Union Springs, Ala.....637
Some Views on the Race Problem. By R. C. Bankston, M.D., Birmingham, Ala..645

SELECTED ARTICLES.

The Value of Glyco-Thymoline (Kress) in Local Treatment of Diseased Mucous Membrane. By George A. Hewitt, M.D., Philadelphia, Pa.....653
The Modern Treatment of Incipient Pulmonary Tuberculosis. By Louis Henry, M.D., Melbourne.....660

EDITORIAL.

Wounds of the Heart.....673
Southern Surgical and Gynecological Society.....674
Death of Dr. Griggs.....677

MISCELLANEOUS NOTES.....679–688
ABSTRACTS.....689–694
BOOK NOTICES.....695–696

Index to Advertisers.

	PAGE
Chas H Phillips Chem. Co	1st Cover
Armour Laboratory	1st Cover
Chas Roome Parmele Co	1st Cover
H. K. Mulford Co	2d Cover
Henry K. Wampole & Co.	1
Battle & Co	1
Peacock Chemical Co	2
Sultan Drug Co	2
Ben. M. Jacobs & Bros	2d Index Card
Micajah & Co	3
Henry Pharmacal Co	3
Mellier Drug Co	4
The G. F. Harvey Co	4
New York Pharmaceutical Co	5
Sharp & Dohme	6
Robinson-Pettet Co	6
H. A. Cassebeer	7
Mariani & Co	7
John B. Daniel	8
Antikamnia Chem Co	9
Drs. Elkin & Cooper	9
Pheno-Bromate Chem. Co	10
G. W. Flavell & Bro	10
Canton Surg. & Dental Chair Co	11
Drs. Davis & Davis' Private Infirmary	11
Drs. Talley & Chapman	12
Beechhurst Sanitarium	12
Nabers, Morrow & Sinnige	12
The Bovinine Co	13
Birmingham Medical College	14
M. J. Brietenback Company	15
Parke, Davis & Co	16
Mellen's Food Co	17
E. J. Hart & Co	18
Chas Marchand	19
The Purdue Frederick Co	19
The New York Pharmacal Associa'n	20
Battle Creek Sanitorium	20
Scott & Bowne	21
Kress & Owen Co	21
Angier Chemical Co	22
Lambert Pharmacal Co	23
Farbenfabriken of Elberfeld Co	24
New York Polyclinic and Hospital	24
The Vass Chemical Company	25
The Gibson Sanitarium	26
College of Phys. & Surg. Baltimore	26
O. D. Chemical Co	26
Globe Manufacturing Co	27
Geo. H. Noble, M. D	28
Wheeler's Tissue Phosphates	28
L. & N. R. R	28
Adams Drug Co	29
Dr. J. B. S. Holmes	29
California Fig Syrup Co	29
Satyria Pharmacal Co.	30
Highland Park Sanatorium	30
The Oakland Chemical Co	31
Martin H. Smith Co	32
Medical College of Alabama	33
University of Maryland	33
Tulane University of Louisiana	34
The Viskolein Company	35
The Atlanta Retreat	35
The Chas. N. Crittenton Co.	36
Fellows' Hypophosphites	3d Cover
Fairchild Bros. & Foster	4th Cover

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